
Provisions for trade of fish and fish products in trade agreements in times of crisis and pandemic: recommendations for negotiation and capacity building

Yi Tang, Yanxuedan Zhang, Yuqiong Sun, Haoran Yang, Yu Zhang

Current Affiliation: Shanghai Ocean University
Fisheries Law Research and Consulting Center

Type of Contribution: Team report

Word count: Executive summary 1992 words + Text 10412 words

Keywords: fishery and aquaculture, China, essential goods

A contribution to the Policy Hackathon on Model Provisions for Trade in Times of Crisis and Pandemic in Regional and other Trade Agreements

Disclaimer: The author declares that this paper is his/her own autonomous work and that all the sources used have been correctly cited and listed as references. This paper represents the sole opinions of the author and it is under his/her responsibility to ensure its authenticity. Any errors or inaccuracies are the fault of the author. This paper does not purport to represent the views or the official policy of any member of the Policy Hackathon organizing and participating institutions.

Provisions for trade of fish and fish products in trade agreements in times of crisis and pandemic: recommendations for negotiation and capacity building*

Executive Summary

To contribute on trade agreements and capacity building during this COVID-19 pandemic, China's experience in sustaining import & export of fish and fish products is studied. Recommendations for negotiation of future trade agreements and capacity building at national level are given.

The outbreak of COVID-19 has affected many aspects of the international trade. According to FAO Director-General *Qu Dongyu*, who stated in the State of World Fisheries and Aquaculture that “fisheries and aquaculture is one of the sectors most impacted by the pandemic”. An investigation of its overall impact in China shows that every aspect of the supply chain, i.e. from production, processing, transportation, to distribution and consumption, is struggling under the pandemic, albeit in a different manner (Section 1). As fish is highly traded food products, disruption in supply chain seriously influence the international trade. From the statistical perspective, the total value of fish and fish products of exports is \$6664.70 million from January to May 2020, fell by 17.85% in a year-on-year comparison. The total value of imports is \$6484.17 million, fell by 11.79%. Trading of some species, such as tilapia, shrimps and prawns, tuna, salmon and portunus are more severely affected. An observation on top ten import & export trading markets shows some interesting features. Trading with certain countries recovers faster than the others. Trading value for a few countries even shows a rapid increase. Apparently, the severity of the pandemic in the country and distance matters. Trading activities with neighboring countries have a better performance in general.

With an assumption that the main challenges are showing distinctive features at different stages of the pandemic, a three-stage investigation is established (Section 2). Firstly, China experienced a so-called “initial stage of outbreak”, fledged with uncertainty about the origin of disease and vectors. With little knowledge developed at the very beginning, the initial panic was transmitted to the market, which resulted in the sudden disruption in trade of fish and fish products. Challenges were identified as difficulties associated with decision-making on the scope of restrictive measures, and losses suffered as a temporary import ban and tightened border control from other countries. In the long-term, since China adopted a comprehensive ban on the trade and consumption of most terrestrial species (excluding poultry and livestock) and some aquatic species, the implementation of Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and trade under World Trade Organization (WTO) might be adjusted accordingly. Compatibility issues are highlighted.

Secondly, after an initial shock, China has entered the “prolonged pandemic” period. The

* The authors would like to thank all contributors to this report. Special thanks are given to Zhang Yuanyuan, for her outstanding contributions in legal enquiry on trade provisions under WTO. Thanks are also given to those who provide helpful information regarding challenges and practices in this pandemic, in particular China Aquatic Products Processing and Marketing Alliance, Wang Jianbo from National Fisheries Technology Extension Center, government officials in Zhejiang, Guangxi Autonomous Region and Fujian Province.

pandemic was gradually controlled, and restriction was lifted in most provinces, although infectious cases in one or two cities might still trigger a sudden lock-down measure under the Emergency Response Law. During this period, challenges were found on difficulties to sustain a reliable logistics, especially for international transportation. Export could suffer tightened border inspection, which was a threat as many fish products are perishable. The uncertainty for export was also greatly increased. Many exhibitions were suspended or canceled. The problem of information asymmetry and language barriers were amplified. Small and Medium-sized Enterprises (SMEs), suffered from all above problems, became more vulnerable in risk mitigation.

Thirdly, while few new cases has been found since April in China, there was a disastrous outbreak in many areas of the world. China has come to a period with a primary focus on prevention of a new wave of outbreak. The potential transmission of virus along with cold chain well illustrates the new challenges during this period. In June, an outbreak was found in a wholesale market for raw meat and fish in Beijing. While the source of outbreak was not confirmed, it has high possibility to connect with imported frozen meat and salmon transported via cold chain. This event was followed by several similar infectious cases, all directing to the potential risk associated with the cold chain. How the Customs and market supervision authorities handle this crisis is a serious challenge, as it is critical for the recovery of trade of frozen goods, especially for certain species, e.g. salmon, shrimps. In addition, “wet market”, the place with first infectious case being found, surfaced as a serious concern due to its worried sanitary issues and difficulties to trace source of food products.

Against all these challenges, some good practice is identified (Section 3). In aspect of crisis handing, an immediate ban on trade and consumption of most live animals is considered as a key measure. While the scope of ban was very broad, it effectively blocked all possible channel for transmission of virus. When more information is available, the government soon establishes a list to exclude “safe” species from the ban, and expands the list further in following months. A comprehensive action plan for resilience led by the State Council is soon initiated after crisis handling, followed by many specific measures taken by different ministries. For instance, the transportation is soon recovered and operated under a risk-based grading system. Under the Ministry of Industry and Information Technology (MIIT), many measures are taken to tackle difficulties faced by SMEs, including green channel for resumption of operation, special funds and exemption from rent and taxes. All of these measures show some advantages under a governance mode labeled as “big government”. Resources could be immediately put into places with urgent need.

The digital trade in China is further developed during this pandemic. Fishermen and fish farm are learning to sell goods directly to the market via APP. New modes such as online exhibition and “*Zhi Bo Shou Huo*” (Live streaming and Sale) are developed.

The cold chain crisis is a good test for risk prevention. The government has adopted a series of effective measures to contain the situation, including conveying accurate information in a timely manner, cooperating with the Customs of exporting countries, and extending precautionary measures to domestic market inspection. However, the imposition of temporary ban on some companies is somehow controversial. Such measures may not be sustainable in a long run.

Based on reviewing the challenges and practice in China, this report moves to examination of

its relevance to trade agreements (Section 4 and 5). Exception provisions and Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) provisions in GATT and RTAs, as well as trade facilitation provisions are identified as highly relevant. To be specific, exception and SPS provisions are not developed primarily to target present situation. Measures taken by countries under “uncertainty” are not well addressed. As for trade facilitation provisions, this pandemic is considered as a test for newly implemented Trade Facilitation Agreement. Preservation of perishable goods, digital trade, risk management, test procedures, and border cooperation are important concerns for fish trade.

An exclusive discussion on lessons learned from this pandemic allows us to provide recommendations on negotiation for future trade agreements and capacity building at national level during and after the pandemic are then given (Section 6). They are:

- **Recommendations for negotiation: set up criteria for restrictive measures under uncertainty.** Requirement of “necessity” for countries to take unilateral restrict measures shall be further elaborated in GATT Article XX(b). The note “*Streamlined Mechanism for Reconciling the Interests of Contracting Parties in the Event of Trade-Damaging Acts*”¹ given by WTO Council in 1989 might be a good starting point to further develop criteria for initiating restrictive measures under uncertainty. It may be further developed. In particular, its procedural requirement of “informal consultation” with the contracting parties might be incorporated in trade agreement.
- **Recommendations for negotiation: adopt more flexible dispute resolution mechanism in RTAs.** With the objective to quickly resolve dispute between the parties concerned, it may be possible to introduce dispute adjudication board mechanism into the RTAs. By providing all disputes shall firstly be referred to adjudication by a dispute adjudication board (DAB) (consist of senior experts in relevant field), it may be helpful for the countries concerned to settle their dispute at early stage by referring to and evaluating on the unbinding adjudication issued by DAB before bringing any action in the courts. This is especially important when there is high uncertainty and the countries concerned may give up its intention of action after evaluating the potential result by referring to the adjudication.
- **Recommendations for negotiation: impose transitional measures for cargo “in transit” and “on-road” trucks.** Countries may set up mutual transitional measures for certain goods which may be adversely affected due to sudden change of border clearance procedure or lock-down. The purpose is to lower down risk brought by long distance transportation. Such measures may set up strict criteria for goods which are eligible to the benefits under, maybe restricting to those on-road trucks or cargo in transit. Furthermore, it should be aware of not causing discrimination against other trading partners.
- **Recommendations for negotiation: countries may enhance cooperation in live animal-related trade negotiation and avoid incompatibility with CITES.** It recommends that China communicates its newly imposed wildlife protection measures with CITES and WTO as soon as possible. It may also share its new experience in regulating breeding animals not falling into the category of livestock and poultry, and propose more strict measures taken by CITES in combating illegal animal trade activities.

¹ WTO (Analytical Index of the GATT), p.572

Moreover, it may have to evaluate the implication of national regulation on international animal trade in the context of WTO, clarify the scope of ban and avoid unnecessary uncertainty on the trade activities.

- **Recommendations for negotiation: provisions to facilitate trade may be further developed by incorporating more considerations in crisis handling and cost reduction.** For Trade Facilitation Agreement (TF Agreement) and RTAs, it may develop trade facilitation provisions further in following aspects: (1) enhance information exchange on measures which potentially impacts trade, including those not traditionally included in Section 1.1 of TF agreement but substantially influence the flow of goods, e.g. lock-down measures by local government or communities which may adversely affect the trade of fish and fish products, and relevant measures local government may take to promote the trade, which including measures for encouraging consumption, facilitation of inland transportation; (2) enhance the use of enquiry points stipulated on Section 1.3 of TF agreement, to communicate important notice and exchange information in times of crisis, and require information being made in more languages than just Chinese, or Chinese and English; (3) revise provisions on disposal of perishable goods. A reduced charges applies when clearance/transport is delayed due to emergent test requirement; (4) further clarify the criteria of risk management by drawing experience from COVID-19 pandemic, in particular avoid arbitrary restriction with too much discretion by the Customs; (5) provide that border agency cooperation shall include facilitating communication with relevant domestic authorities to avoid unnecessary delay of transportation in times of crisis (e.g. strengthen mutual administrative assistance agreements to reduce domestic transport disruption as provided in the Revised Kyoto Convention General Appendix).
- **Recommendations for negotiation: develop a separate chapter on digital trade in RTAs.** It has seen the boom of digital trade during this pandemic. However, the digital means may achieve much more in domestic market than in international market. There are still barriers which potentially increase risk and costs. It is suggested a separate chapter on digital trade to be developed, primarily targeting aspect of consumer protection, digital certificates, electronic authentication, and paperless trade facilitation.
- **Capacity building: measures taken to transform wholesale market for raw meat and fish to improve food safety.** Measures can be taken to improve sanitary condition in wholesale market, especially the “wet market”, to avoid any potential risk of virus transmission. A better traceability system with transparency is required to be built up, which will allow authority better target problematic goods. After experiencing too many wholesale market halting, it might also require a better backup plan in future to minimize the disruption caused by collapse of such distribution hub in locals.

Contents

1. Overview of trade on fish and fish products during the COVID-19 pandemic: a China’s perspective.....	1
1.1 The supply chain for fish and fish products in China.....	1
1.2 An overview of problems for capture fish and fish products supply chain during the COVID-19 pandemic	2
1.3 Trade of fish and fish products during the COVID-19 pandemic: a statistical perspective.....	3
2. Challenges for trade of fish and fish products in times of crisis and pandemic.....	8
2.1 Challenges associated with uncertainty on origin of disease at the beginning of the COVID-19 outbreak.....	8
2.2 Challenges in supply chain and trade during a prolonged pandemic	11
2.3 Challenges associated with uncertainty on the transmission of virus along cold chain in June and July 2020	12
3. Good practice for trade of fish and fish products in times of crisis and pandemic.....	14
3.1 Good practice for crisis handling at the beginning of the pandemic.....	14
3.2 Good practice for sustaining the supply chain in a prolonged pandemic.....	14
3.3 Good practice for handling cold chain crisis in June and July 2020.....	16
4. An overview of relevant provisions for trade of fish and fish products in times of crisis and pandemic.....	18
4.1 Exception provisions	18
4.2 SPS provisions.....	19
4.3 Trade facilitation provisions.....	20
5. Discussion and analysis.....	20
5.1 Invoking exception clause and SPS requirements under uncertainty.....	21
5.2 Consideration of transitional measures when temporary restrictive measures are imposed	22
5.3 Compatibility of national regulation with WTO and CITES in animal-related trade .	23
5.4 A test for implementation of Trade Facilitation agreement in crisis	24
5.5 Wholesale market comes to the center of discussion	25
5.6 The boom of digital trade and its implication for RTAs.....	25
6. Recommendations for negotiation and capacity building	26
7. Concluding remarks	27
List of Reference.....	29

Figures and Tables

Figure 1.1.1	A general supply chain for fish and fish products
Figure 1.3.1	The growth rate of China's export of fish and fish products in 2020 based on the same period in 2019
Figure 1.3.2	The growth rate of China's import of fish and fish products in 2020 based on the same period in 2019
Table 1.3.1	China's export of fish and fish products to top 10 biggest trading partners
Table 1.3.2	China's import of fish and fish products from top 10 biggest trading partners
Table 1.3.3	Export of major fish products from January to May 2020 based on the same period in 2019
Table 1.3.4	Import of major fish products from January to May 2020 based on the same period in 2019

Abbreviations

ASEAN	Association of Southeast Asian Nations
CAPPMA	China Aquatic Products Processing and Marketing Alliance
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COVID-19	Corona Virus Disease 2019
DAB	Dispute Adjudication Board
ECJ	European Court of Justice
EEC	European Economic Community
EEZ	Exclusive Economic Zone
FAO	Food and Agriculture Organization of the United Nations
GAC	General Administration of Customs of China
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
LPL	Livestock and Poultry List
MARA	Ministry of Agriculture and Rural Affairs
MEA	Multilateral Environmental Agreement
MIIT	Ministry of Industry and Information Technology
MoC	Ministry of Commerce
MoT	Ministry of Transport
NFGA	National Forestry and Grassland Administration
OAS	Other Aquatic Species
OIE	World Organization for Animal Health
OTS	Other Terrestrial Species with important ecological, scientific and social value
RCEP	Regional Comprehensive Economic Partnership
REA	Rare and Endangered Animals
RES	Rare and Endangered Species

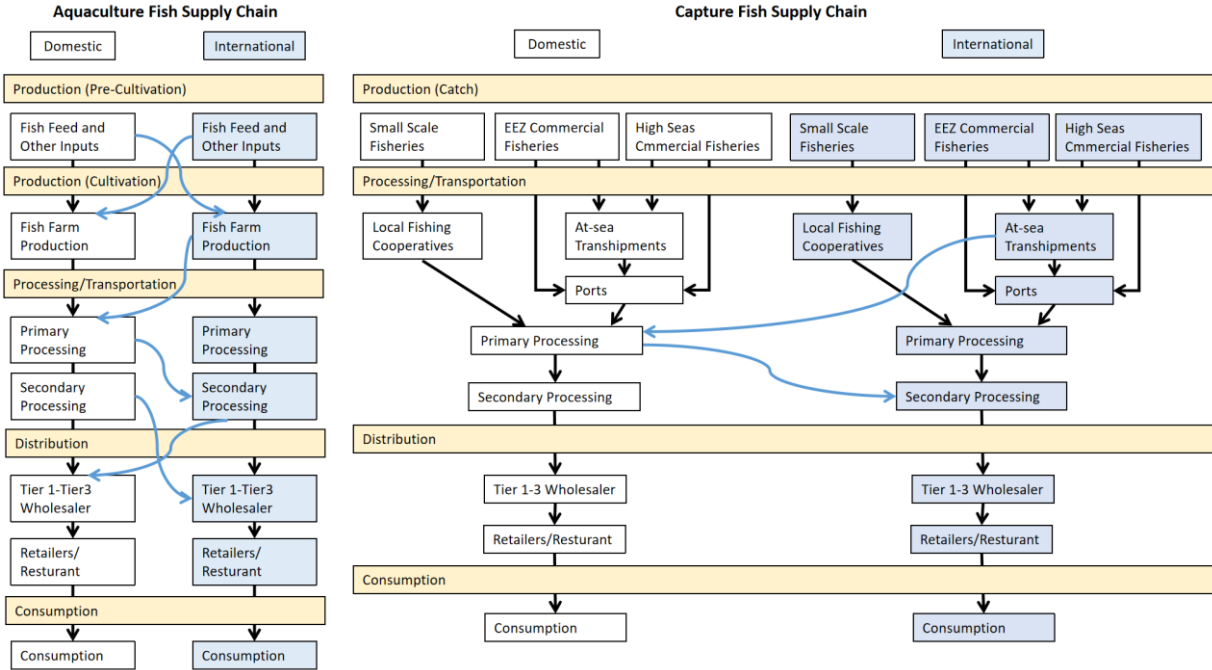
RTA	Regional Trade Agreement
RWPGP	Regulation on Wildlife Protection in Guangdong Province of 2020
SAMR	State Administration for Market Regulation
SARS	Severe Acute Respiratory Syndrome
SME	Small and Medium-sized Enterprise
SPS	Agreement on the Application of Sanitary and Phytosanitary Measures
TBT	Technical Barriers to Trade
TF	Trade Facilitation
WCO	World Customs Organization
WTO	World Trade Organization

1. Overview of trade on fish and fish products during the COVID-19 pandemic: a China’s perspective

1.1 The supply chain for fish and fish products in China

Fish and fish products² are highly traded food products in the world. About 38% of total fish production enters international market.³ China is a major importer and the biggest exporter in the world, with an annual trade volume of 10533.2 thousand mt (in total \$393.59 billion) in 2019.⁴ Except for edible use, there are a large ornamental fish market (e.g. goldfish) and high-end fish trade market (e.g. lobster). The production of ornamental fish is around 392.51 million tails in 2019.⁵

The domestic market for fish and fish products in China is highly intertwined with the international market. A simplified graph of supply chain may give some insights on the complex relation.



Notes: tier 1-3 wholesaler refers to wholesalers at national, regional and local level respectively; primary processing normally refers to heading, cutting and simple freezing process; secondary processing includes canning, drying and other more sophisticated processing technologies.

² Fish and fish products normally refer to goods with a HS Code in category 0301~0308, including finfish, crustacean, molluscs and aquatic invertebrates. However, this report will also address certain other species traded in Asian countries, primarily reptiles and amphibians (HS Code 0106).

³ FAO, ‘Summary of the Impacts of the COVID-19 Pandemic on the Fisheries and Aquaculture Sector, Addendum to the State of World Fisheries and Aquaculture 2020’, 1 June 2020.

⁴ The Fisheries Administration of the Ministry of Agricultural and Rural Affairs and China Society of Fisheries, *China Fishery and Aquaculture Statistical Yearbook 2020*. China Agriculture Press.

⁵ *ibid*

(Figure 1.1.1 A general supply chain for fish and fish products)⁶

The blue arrow in the figure highlights major international trading activities in fish and fish products. For both sectors, three general trading modes are identified:

Firstly, domestic producers may catch or cultivate fishes and export to foreign market after processing. Tilapia, yellow croaker, shrimps, hairtail, sea eel are main species for export. Fresh or chilled fish and skinless fillets, and frozen fish and fillets are the main type of goods. The secondary processing is under developed. The proportion of frozen deep-processed products, surimi products, canned meat, fish meal and fish oil accounts for about 45% of all fish production.⁷ Secondly, fish may be caught by foreign vessels or cultivated by foreign farms and imported to China for consumption. Hairtail, crayfish, crabs, salmon and squid are main species for import. Thirdly, fish may be imported to processing factories located in China and re-export to foreign market, primarily Japan, South Korea, the EU and the U.S. markets. Cod, trouts and prawns are good examples under this mode. Processing factories are normally in coastal cities in Zhejiang, Shandong, Jiangsu, Fujian and Guangdong province, with some skilled migrant works from inland provinces.⁸

In addition, for aquaculture, fish meal is an important goods to be imported from foreign markets. Data shows that China's fish meal imports amounts to 1,418,725 tons, with a total value of \$1,970 million.⁹ Peru is the biggest trading partner, accounting for 58% of total imports.¹⁰ As for fish caught on the high seas or the exclusive economic zone (EEZ), they are likely to be processed (heading and gutting) on fishing or transit ship, in port of other countries for containerization and shipment, then imported into China for further processing and consumption.¹¹

1.2 An overview of problems for fish and fish products supply chain during the COVID-19 pandemic

During this COVID-19 pandemic, it has found disruption at both ends of the supply chain, i.e. the production and consumption, as well as the flow of goods along with the whole supply chain. Before heading for an elaborated investigation on challenges for trade, we'll give a general overview of the impacts of COVID-19 in this subsection.

For production, the pandemic affects capture fish and aquaculture differently.¹² Fishing activities were suspended for about 1.5 months from January (the Chinese spring festival) to February 2020 in most coastal areas of China, and then gradually recovered in March and

⁶ This graph is adapted from iisd report. See Arthur Hanson, He Cui, Linlin Zou, Shelley Clarke, et. al., *Greening China's Fish and Fish Products Market Supply China*, 2011. pp: 6.

⁷ Li Wanjun, 'Meat Research, Deep Processing and Quality Safety Analysis of Aquatic Products in my country-An Interview with Professor Xue Changhu from Ocean University of China', 2018, 2 Meat Research 32, 11-14. [in Chinese]

⁸ The Fisheries Administration of the Ministry of Agricultural and Rural Affairs and China Society of Fisheries, pp.95.

⁹ Data is from GAC.

¹⁰ *ibid*

¹¹ He Cui, Linlin Zou, Shelley Clarke, et. al., pp:72.

¹² According to responses to FAO, the disruption in aquaculture sector is more severe than fishing sector. One reason might be the aquaculture sector suffers from shortage of fish meal and input on the one hand, an overstock of fishes in the pond on the other hand. See FAO, 'the Impact of COVID-19 on Fisheries and Aquaculture-a Global Assessment from the Perspective of Regional Fishery Bodies', May 2020.

April¹³. It entered the fishing closed season from 1 May 2020. Most fishing activities stopped in the Bohai Sea, the Huanghai Sea, the East China Sea and the South China Sea.¹⁴ In general, the production season has substantially shortened for most fishermen at coastal areas this year. On the other hand, fishing activities on the high seas and EEZ of other countries were affected in a different way. The measures taken by other countries, and the availability of supply and transit ship are crucial factors. The Chinese government has issued protocol to guide operation and set daily inspection requirement for sailors in February.¹⁵ For instance, daily check of temperature is required. Upon landing, a 14-day quarantine is mandatory.

As for aquaculture sector, disruption in logistics has caused insufficient supply of fish meal and other inputs during the lock-down. The initial shock has substantially affected the distribution and sale of fishes, which we will give more analysis in Section 2. After the lift of restriction in March, however, a gloomy market posed challenges to continued production. Demand was not recovered.¹⁶ Some farms preferred to keep fishes in the pond and waited for a better market price. A late harvesting has caused a general delay of annual production plan.

For consumption, hospitality sector and restaurants were hit particularly hard. The associated challenges are well documented by two FAO questionnaires in March and April respectively. China has suffered similar problems in this aspect. Demand was dropped severely, especially for high-end products. However, it also detected a rapid recovery in some local markets after the easing of restrictive measures. The consumption of crayfish from April 2020 serves as a good example. Every year from April to October, crayfish is a very popular food in restaurants, especially in Hubei province, the center of epidemic.¹⁷ In 2020, the price of large-size crayfish has experienced a sharp rise in March to ¥120/kg in Hubei, much higher than the average-size crayfish price in 2019.¹⁸ Although the price dropped to a level lower than last year as the market is oversupplied with crayfish later, it released a signal that strong market demand may still exist for certain popular species.

The flow of goods was a serious problem in January and February. The The Ministry of Agriculture and Rural Affairs (MARA) has issued several orders to facilitate the supply during and after the lock-down period. What is worth noting is a questionnaire done upon 78 medium-to-big fish processing enterprises by China Aquatic Products Processing and Marketing Alliance (CAPPMA), which revealed the scale of impact and problems.¹⁹ We'll give more discussion in Section 2.

1.3 Trade of fish and fish products during the COVID-19 pandemic: a statistical perspective

By collecting data from the General Administration of Customs of China (GAC), we are able to draw a rough picture of the trade of fish and fish products during the pandemic. The total

¹³ Shi Lei, Liu Longteng and Qin Hong, 'Development of Fisheries Industry under COVID-19: Impact, Countermeasure and Long-term Impact', 2000, 1 China Fisheries Economy 38, pp: 2-7. [in Chinese]

¹⁴ See MARA, the Notice on Adjusting the Fish Close Season (NYF[2018]1). [in Chinese]

¹⁵ MARA, Emergency Order on Further Strengthening COVID-19 Prevention and Control for Fish Vessels Operating on High Seas and EEZ of other countries (NBY[2020]7). [in Chinese].

¹⁶ See FAO, 'Chinese Fish Price Report'. Issue 1/2020.

¹⁷ Fisheries Administration of Agriculture and Rural Departments, National Aquatic Technology Extension Station, Chinese Fisheries Society, 'China Crayfish Industry Development Report (2019)'. September, 2019. [in Chinese]

¹⁸ FAO ('Chinese Fish Price Report'), pp.9.

¹⁹ CAPPMA, 'Investigation Report on the Impact of COVID-19 on Fish Processing Sector', March 2020.

value of fish and fish products exports is \$6664.70 million from January to May 2020, fell by 17.85% in a year-on-year comparison. The total value of imports is \$6484.17 million, fell by 11.79%.

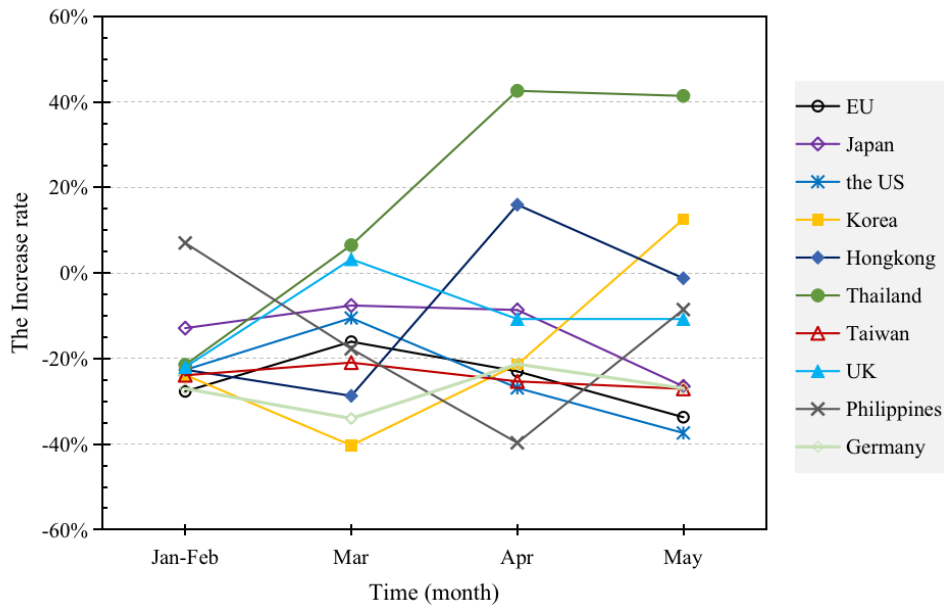
Unit: thousand USD

		Jan-Feb		Mar		Apr		May	
EU	2019	255,988		120,387		177,727		180,888	
	2020	185,156	-27.67%	101,058	-16.06%	136,872	-22.99%	119,927	-33.70%
Japan	2019	296,585		150,451		145,399		206,127	
	2020	258,366	-12.89%	139,027	-7.59%	132,835	-8.64%	151,494	-26.50%
the US	2019	191,553		79,904		120,052		130,178	
	2020	148,168	-22.65%	71,497	-10.52%	87,797	-26.87%	81,492	-37.40%
South Korea	2019	215,998		119,962		128,023		98,689	
	2020	164,547	-23.82%	71,615	-40.30%	100,636	-21.39%	111,112	12.59%
Hongkong	2019	141,627		99,964		61,393		81,342	
	2020	109,613	-22.60%	71,260	-28.71%	71,193	15.96%	80,336	-1.24%
Germany	2019	67,374		43,761		58,703		62,131	
	2020	49,168	-27.02%	28,876	-34.01%	46,202	-21.30%	45,385	-26.95%
Thailand	2019	104,418		94,596		53,730		55,175	
	2020	82,015	-21.46%	100,752	6.51%	76,611	42.59%	78,015	41.40%
Taiwan	2019	115,897		61,964		55,750		54,250	
	2020	88,190	-23.91%	48,987	-20.94%	41,627	-25.33%	39,560	-27.08%
UK	2019	49,933		23,840		31,578		37,987	
	2020	38,952	-21.99%	24,608	3.22%	28,182	-10.75%	33,901	-10.76%
Philippines	2019	76,208		57,814		45,965		34,538	
	2020	81,558	7.02%	47,567	-17.72%	27,722	-39.69%	31,586	-8.55%

Note: The data for EU covers 27 countries, excluding the UK. Germany is also listed as it is the tenth biggest trading partner.

(Table 1.3.1 China's export of fish and fish products to top 10 biggest trading partners)²⁰

²⁰ Data is collected from GAC.



(Figure 1.3.1 The growth rate of China's export of fish and fish products in 2020 based on the same period in 2019)²¹

The above table and figure show China's export of fish and fish products to the ten biggest trading partners from January to May 2020. Although it is in general a downward trend, the trend for each country differs. The initial shock has caused the sudden drop of export volume in most markets. While no exact data is available, some restrictive measures may have blocked the flow of goods. However, after China lifting its lock-down measures in March, the trading volume did not recover, but showed different patterns in different markets. For EU, the US and Japan, the trading volume dropped further. While for places like Hongkong and South Korea, the trading volume bounced back quickly. As for places like Philippines and UK, it cannot find a consistent pattern. Some other reasons may contribute to such a trading situation.

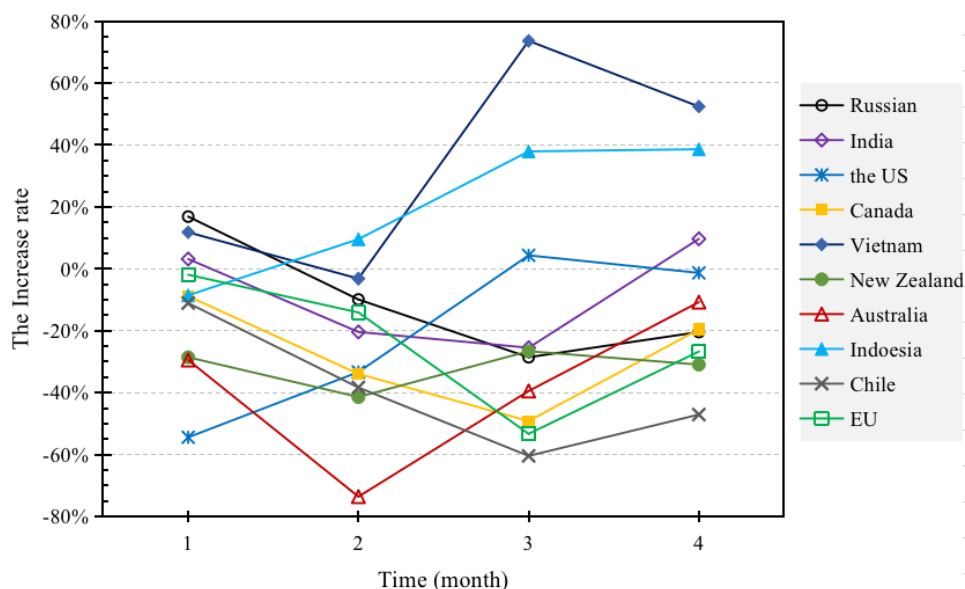
²¹ *ibid*

Unit: thousand USD

		Jan-Feb		Mar		Apr		May	
Russian	2019	287,409	16.87%	255,720	-9.91%	321,119	-28.56%	159,238	-20.43%
	2020	335,897		230,384		229,401		126,708	
India	2019	166,362	3.17%	59,881	-20.39%	77,395	-25.49%	88,740	9.66%
	2020	171,641		47,671		57,667		97,316	
the US	2019	107,195	-54.42%	91,757	-33.34%	99,735	4.35%	79,241	-1.31%
	2020	48,857		61,163		104,070		78,199	
Canada	2019	202,855	-8.83%	62,267	-33.93%	78,372	-49.17%	78,747	-19.58%
	2020	184,938		41,141		39,834		63,327	
Vietnam	2019	79,703	11.79%	46,539	-3.16%	54,957	73.62%	71,475	52.41%
	2020	89,103		45,068		95,419		108,933	
New Zealand	2019	62,631	-28.56%	31,242	-41.40%	35,187	-26.61%	61,714	-30.95%
	2020	44,742		18,309		25,823		42,616	
Australia	2019	190,328	-29.47%	65,162	-73.58%	51,202	-39.47%	56,997	-10.76%
	2020	134,234		17,215		30,993		50,864	
Indonesia	2019	120,420	-8.55%	47,256	9.56%	44,373	37.92%	50,077	38.62%
	2020	110,119		51,774		61,201		69,417	
Chile	2019	91,407	-11.06%	38,086	-38.33%	38,648	-60.42%	44,351	-47.08%
	2020	81,298		23,486		15,295		23,470	
EU	2019	58223	-1.91%	33844	-14.09%	38,333	-53.30%	32,944	-26.72%
	2020	57,111		29,074		17,901		24,142	

Note: the data of EU covers 27 countries, excluding the UK.

(Table 1.3.2 China's import of fish and fish products from top 10 biggest trading partners)²²



(Figure 1.3.2 The growth rate of China's import of fish and fish products in 2020 based on the same period in 2019)²³

The import market shows a somehow different picture. Similar to the export market, most trading activities suffer losses. However, the pattern for each single market is different, which may be attributable to different reasons. COVID-19 may explain part of the situation. For

²² *ibid*

²³ *ibid*

instance, India started its lock-down policy from March, which may result in a drop in trade at the first two months;²⁴ the pandemic became more severe in Russia in April and May. The close-down of the border markets may explain.²⁵ But there are definitely more reasons. The friction with Australia may contribute to the gloomy performance of import volume in 2020; the easing of trade relation with the US may explain the rise in trade volume.²⁶

If we select major import & export species and take a closer look, we can find following patterns:

	Main Trading Species according to the Custom Code	Jan-May 19 (USD)	Jan-May 20 (USD)	Increase rate
Export	Frozen cuttlefish (Sepia, Giant Monkhead Squid, Ear Squid) and Squid (Asparagus, Calamari, Diospyros, Pseudosepia)	219,071,521	181,790,819	-17.02%
	Frozen Tilapia	95,275,813	65,086,561	-31.69%
	Frozen yellow croaker	77,930,428	65,123,064	-16.43%
	Fresh or cold yellow croaker	20,050,274	21,507,317	7.27%
	Other live prawns and live, fresh or cold shrimp, except fries and fingerlings	14,910,263	28,026,120	87.97%
	Frozen hairtail	12,356,963	13,168,785	6.57%
	Frozen pollock	11,368,479	7,452,857	-34.44%
	Frozen cold water shrimp	4,271,207	2,384,985	-44.16%
	Live tilapia	813,940	1,045,393	28.44%
	Fresh or cold hairtail	301,744	423,068	40.21%
	Frozen cod	336,576	499,206	48.32%

Note: "other live prawns and live, fresh or cold shrimp, except for fries" (HS code 03063690) refers to prawn and shrimps not belong to reef shrimp, palinurus, lobster, crab, cold water shrimp, scampi and fries.

(Table 1.3.3 Export of major fish products from January to May 2020 based on the same period in 2019)²⁷

For export, frozen tilapia, frozen pollock and frozen cold water shrimp have a larger drop than average. For frozen tilapia, exports to the U.S., Côte d'Ivoire, Mexico, Burkina Faso, Kenya and Mali accounted for around 60% of the market in 2019. The performance went better for frozen tilapia, as the U.S. decides to impose tariff exemptions on 177 Chinese imports, including small size frozen tilapia.²⁸ For cold water shrimp, export to Japan accounted for 98% of export market in 2019.²⁹ When Japan locked down and market shrank subsequently as a consequence, it is not surprising that the trade volume dropped, as no other market may develop a need at a short span of time. For frozen pollock, export to North Korea accounted for 84% of market. The shutdown of the border markets in January may cause the overall drop.

²⁴ INFOFISH, 'India and Ecuador: When COVID-19 Makes Harvest and Processing of Prawn Complicated', 29 April 2020. Link: <<http://infofish.org/v3/index.php/component/k2/item/206-india-and-ecuador-when-covid-19-makes-harvest-and-processing-of-prawn-complicated>>.

²⁵ Several orders on closing down border and reminders were sent. E.g., see Foreign Affairs Office of Heilongjiang People's Government, 'Notice on Closing-down Border'. 11 April 2020. Link: <<http://www.hljfao.gov.cn/newsshow.php?cid=5&id=1462&lanmu=2&zt=0>>. [in Chinese]

²⁶ Some seafood is also included in Phase I package taking effect in January 2020. See PBS, 'Read the full U.S.-China "Phase I" Trade Agreement', 16 Jan 2020. Link: <<https://www.pbs.org/newshour/economy/read-the-full-u-s-china-phase-1-trade-agreement>>

²⁷ Data is from GAC.

²⁸ Aquaculture Network, 'U.S. demand for small tilapia increased after the tariff exemption', 15 July 2020. Link: <http://www.shuichan.cc/news_view-404810.html> [in Chinese]

²⁹ Trade Information for Countries can be found on Border Network. Link: <<http://hs.bianmachaxun.com/report/>>. Accessed on 15 July 2020.

	Main Trading Species according to the Custom Code	Jan-May 19 (USD)	Jan-May 20 (USD)	Increase rate
Import	Other frozen prawns	1,098,813,411	1,366,539,508	24.37%
	Frozen pollock	593,343,336	518,288,236	-12.65%
	Atlantic salmon, fresh or cold	297,457,962	198,111,117	-33.40%
	Frozen cuttlefish (Sepia, Giant Monkhead Squid, Ear Squid) and Squid (Asparagus, Calamari, Diospyros, Pseudosepia)	194,053,437	190,018,520	-2.08%
	Other live prawns and live, fresh or cold shrimp, except fries and fingerlings	89,272,363	35,900,758	-59.79%
	Frozen hairtail	70,493,309	102,971,197	46.07%
	Frozen cod	15,181,500	12,145,200	-20.00%
	Fresh or cold hairtail	10,085,190	10,112,673	0.27%
	Frozen trout	8,622,693	9,930,413	15.17%
	Fresh or cold Pacific bluefin tuna	5,599,683	3,138,938	-43.94%
	Live, fresh or cold portunus, except for seedlings	4,521,791	652,501	-85.57%
Frozen Portunus	619,402	1,595,656	157.61%	

Note: "other live prawns and live, fresh or cold shrimp, except for fries" (HS code 03063690) refers to prawn and shrimps not belong to reef shrimp, palinurus, lobster, crab, cold water shrimp, scampi and fries.

(Table 1.3.4 Import of major fish products from January to May 2020 based on the same period in 2019)³⁰

In general, Atlantic salmon, shrimps and prawns, pacific bluefin tuna and portunus have experienced a massive drop. Chile and Norway accounted for 70% of import market for fresh salmon in 2019. The import of tuna dropped massively, which may be a result of lock-down policy in Japan, as it is the major trading counterparts. Bangladesh and Myanmar accounted for 87% of market for fresh portunus in 2019. While the trade volume drops heavily, there is raise in import of frozen ones. Preservation could be a good reason.

To conclude, from this macro-level analysis, we may get a general impression of the trade activities of fish and fish products in the first five months of 2020. Although trade could be influenced by many factors, it is still able to detect a substantial influence brought by COVID-19 pandemic. The scale of influence upon a single market may not be easily concluded, as elasticity matters, so is the interaction between different markets. Although it is beyond our ability to conduct a comprehensive review, it is possible to highlight some serious challenges at different stages of the pandemic in next section.

2. Challenges for trade of fish and fish products in times of crisis and pandemic

2.1 Challenges associated with uncertainty on origin of disease at the beginning of the COVID-19 outbreak

- **Description:** unlike most other countries in this COVID-19 pandemic, China has experienced a so-called "initial stage of outbreak", fledged with uncertainty about the origin of disease and vectors³¹. With little knowledge developed at the very beginning, the initial panic was transmitted to the market, which resulted in the sudden disruption in trade of fish and fish products. Many wholesale markets (especially those "wet markets") for raw meat, fish and other live animals were shut down locally.

³⁰ Data is from GAC.

³¹ At present, there is evidence which shows that COVID-19 virus may not origin from China. Therefore, we use double quotation marks here. See Thomson Reuters, 'WHO urges countries to investigate early COVID-19 Cases', 5 May 2020.

Link: <<https://www.cbc.ca/news/world/who-france-covid-19-early-cases-1.5555573>>

-
- **Short-term impact and challenges:** considering the potential risk associated with animals, some countries imposed import restriction, tightened border inspection or closed border markets temporarily. According to WTO, there are certain number of notifications and communications issued relating to import restriction on animals or agricultural products³². South Korea tightened SPS requirements on fish and live animals from China³³. Mongolia, Russia and Tajikistan closed border market in February³⁴. Some other countries also expressed concerns over the risk associated with animals. Not all of these restrictions were justified, which exposed the lack of mechanisms for countries to make decision under “uncertainty”, especially at the time no elaborated risk assessment being made at international level. It also reflects a prolonged issue of arbitrariness and lack of transparency by referencing GATT Article XX(b) and SPS agreement³⁵.

 - Many wholesale markets, especially the “wet market” for raw meat, fish and live animals, were closed down due to uncertainty on the vector and transmitting route. Since the outbreak started in aquatic products and live animal market in Wuhan city, rumors were widely spread on the danger of consuming animal products. In February, as lock-down measures continued, the distribution became a serious problem for fish products, transaction in key markets dropped to 10% in February compared with same period in 2019, according to monitoring report by the MARA.³⁶ Some initial research made the situation even worse, as they indicated that aquatic species (turtle) might be the vector.³⁷

 - **Long-term impact and challenges:** the Standing Committee of National People’s Congress issued a comprehensive ban on trade and consumption of wildlife and breeding “wildlife” in February, which may change the landscape of animal trade permanently, especially for those human-bred or domesticated animals not listed on the Livestock and Poultry List (LPL)³⁸.

 - Traditionally, China imposed a separate administrative system on species management. Terrestrial species and aquatic species were administered under different departments. Terrestrial species are divided into those in LPL, Rare and

³² WTO OMC, ‘Report on G20 Trade Measures: Mid-October 2019 to Mid-May 2020’. 29 June 2020. pp: 52-53.

³³ Zhao Yongqiang et.al., ‘Influence of novel coronavirus-caused pneumonia on China’s aquatic products processing industry’. 2020. 2 China Fisheries Study 38, 30-36, 34.

³⁴ Hainan Committee of CCPIT, ‘More than 20 Countries and Regions adopted import & export restrictions for goods and people’, 21 Feb 2020.

Link: <<http://www.ccpithn.org/index.php?m=content&c=index&a=show&catid=35&id=2055>>

³⁵ See Case WT/DS26 European Communities - Measures concerning Meat and Meat Products (Hormones); Case WT/DS18 Australia - Measures affecting Importation of Salmon; Case WT/DS430 India - Measures concerning the Importation of Certain Agricultural Products.

³⁶ MARA, ‘Press Conference - Jiang Kaiyong, Deputy Director of the Fishery Administration answered questions on the situation of ensuring stable production and supply of aquatic products’, 24 February 2020. Link: <http://www.moa.gov.cn/xw/bmdt/202002/t20200224_6337617.htm> [in Chinese]

³⁷ Zhixin Liu et. al., ‘Composition and Divergence of coronavirus spike proteins and host ACE2 receptors predict potential intermediate hosts of SARS-CoV-2’, 2020, 6 Journal of Medical Virology 92, 595-601.

³⁸ The livestock and poultry list was renewed by MARA, which includes 17 traditional species 848 breeds, and 16 special species 49 breeds. See MARA, Notice on Publishing National Livestock and Poultry List. 29 May 2020.

Link: <http://www.moa.gov.cn/gk/tzgg_1/tz/202005/t20200529_6345586.htm> [in Chinese]

Endangered Species (RES), and other terrestrial species with important ecological, scientific and social value (hereafter “OTS”). Aquatic species are also divided into REA and other aquatic species (hereafter “OAS”). There is substantial overlap between OTS and OAS, for example, many reptiles and amphibians may be considered as OTS and OAS at the same time. MARA is responsible for the management of LPL and all aquatic species, while National Forestry and Grassland Administration (NFGA) is responsible for the management of terrestrial RES and OTS.

- The management of OTS and those OAS not strictly defined as fish is a gray area for long time³⁹. Some species are quite popular food or material for Chinese medicine.⁴⁰ To meet the demand, there is a big breeding industry. The breeding history is so long that some species are even considered being domesticated.⁴¹ After the outbreak of COVID-19, the Standing Committee of National People’s Congress issued an emergency order, which banned the trade and consumption of all terrestrial species not in LPL.⁴² It caused problems in long-term since: (1) There is overlap between OAS and OTS, it may require clarification whether species in this group is allowed for trade. Softshell turtles (*trionyx sinensis*), bullfrog (*Rana catesbiana*) and reeve’s turtle (*chinemys reevesii*) are good examples. Their trading stayed in limbo for quite a while before being re-classified as aquatic species, included in the “Lists of National Key Protected Economic Aquatic Plants and Animals” published by MARA, which will be managed with other aquatic species.⁴³ Most subspecies of snakes, on the other hand, were categorized as terrestrial animals, banning from consumption⁴⁴. (2) The Wildlife Protection Act is called for a full revision in National People’s Congress.⁴⁵ With many species not strictly under the category of “fish” being prohibited from trade, it may trigger concerns over the compatibility of trading activities under WTO rules with those under CITES. Interestingly, it noted that Vietnam is also undertaking a revision of its animal protection law.⁴⁶ The boundary between legal trade and illegal trade, and species under regulation of CITES may face a adjustment. The adjustment will not only on which species are allowed for trade, but also the purpose of usage. Edible use may be strictly prohibited for most species.

³⁹ Emily Feng and Amy Cheng, ‘Pandemic Causes China to Ban Breeding of Bamboo Rats and Other Wild Animals’. NPR Coronavirus Crisis, 28 June.

Link:<<https://www.npr.org/sections/goatsandsoda/2020/06/28/883900042/pandemic-causes-china-to-ban-breeding-of-bamboo-rats-and-other-wild-animals>>

⁴⁰ Lawrence Watters and Wang Xi, ‘The Protection of Wildlife and Endangered Species in China’, 2002, 3 Georgetown International Environmental Law Review 14, 489-524.

⁴¹ Wenxuan Yu, ‘On Legal Path of Wildlife Conservation:From The Perspective of Exceeding Utilitarianism’, 2017, 5 China Legal Science 31, 33-36. [in Chinese]

⁴² MARA, Notice on the Enforcement of the Decision on Prohibiting the Illegal Transaction of Wildlife, Abolishing Edible Use of Wildlife and Protecting Human Health. (4 March 2020). [in Chinese]

⁴³ FAO (Chinese Fish Price Report), pp: 5.

⁴⁴ See Annex to Wildlife Protection Act of Guangdong Province, a local legislation passed on 31 March 2020, in an response to the outbreak of COVID-19. [in Chinese]

⁴⁵ The Paper, ‘Speech by President Li Zhanshu of Standing Committee of NPC on Meeting related to Enforcement Assessment of Wildlife Protection Law’, 23 July 2020. Link: <https://www.thepaper.cn/newsDetail_forward_8404041>. [in Chinese]

⁴⁶ MACMAP, Vietnam notification on its initiative to draft a ban on the trade and consumption of wildlife. Link: <https://macmap.org/OfflineDocument/Covid19/COVID_VNM_1.pdf>. Accessed 10 July 2020.

2.2 Challenges in supply chain and trade during a prolonged pandemic

- **Overview:** trade of fish and fish products have two features. Firstly, it is a perishable goods, which means its transportation has higher requirements, especially for high-end products (belly cargo is a frequently used means). Secondly, it is a highly traded product. In a prolonged COVID-19 pandemic, although disruption is not typically from trade restrictions (import & export), concerns of uncertainty, plummeted demand, transportation, information asymmetry, language barriers etc.. may all constitute challenges. Without proper handling, some may permanently change the landscape of fish trade. We'll highlight some most serious challenges in supply chain and trade.
- **Transportation problem:** for domestic transportation, some provinces in China implemented traffic control, closed provincial roads and inter-provincial roads during initial stage of the pandemic (Jan-Feb). Truck transport on the roads was greatly restricted, making it impossible for goods to move between provinces in the country. If bypassing the epidemic area, the transportation cost could be high. In terms of international transport, as the epidemic spreads around the world, the number of international flights from China to all over the world has been greatly canceled, which has reduced the capacity of carrying goods. Meanwhile, various high risks in international transportation including returning outwards, booking with high cost and nonreturnable cargo are hard to predict.⁴⁷
- **Border check and preservation of perishables:** strict control (e.g. 14 days quarantine rule) in certain countries and regions is causing disruptions and increasing the risk of spoilage of perishable foodstuffs⁴⁸. The tightened inspection and quarantine makes trade costly, more difficult and less efficient. As the outbreak continues to spread, countries' preventive measures in certain regions have escalated further. Even though WHO suggested that "there is no reason to take unnecessary measures to interfere with international travel and trade", many countries still adopts more stringent restrictions in practice even after initial shock.⁴⁹
- **Uncertainty for export to major markets:** when entered into March, information on food-related trade measures in foreign markets is hard to predict. Exporters currently prefer shorter transportation to lower the risk but still face more non-tariff barriers, making exports more difficult. For example, Jordan announced a ban on the import of Chinese animal and plant products. A Ningbo company, which exported to Turkey 15 containers of aquatic products were banned from entry, which cause high losses.⁵⁰ In addition, due to the complex situation of global pandemic, it is unable to act based on experience or past trading data. Demand could come from places unpredictable. As shown in Section 1, it found that the overall export situation is in a shrinking state. Exports with more trading counterparts are generally better than

⁴⁷ Zhang Fang and Tang Jijun, 'Crisis and Turnaround: The Rescue Strategy of China's foreign trade Enterprises in the context of global epidemic spread', 2020, Contemporary Economic Management 42, online. [in Chinese]

⁴⁸ See Bollore Logistics, 'COVID-19 Impact Update'.

Link: <<https://www.bollore-logistics.com/en/Pages/COVID-19.aspx>>. accessed on 2 July 2020.

⁴⁹ Wei Qian and Zhang Yu, 'Impact of COVID-19 on China's imports and exports in 2020 and countermeasures'. 2020. 2 Journal of Shandong University of Administration 171. 96-104. [in Chinese]

⁵⁰ Chen Shuping, 'Analysis of the impact of china's international trade in aquatic products under the outbreak of the CONVID-19 Virus', 2020, Scientific Fish Farming 4, 3-4. [in Chinese]

exporting to a single market. Frozen fishes (typically tilapia) to European and the U.S. market increased unexpectedly, as consumers inclined to buy affordable frozen fish and cook at home.

- **Suspension of exhibition and difficulties associated with using online tools:** exhibitions are traditionally an important means for making deals in fish sector. Fish trade associations play an important role in organizing and bridging the buyers and sellers.⁵¹ However, most major exhibitions worldwide canceled. Although exporters may use online tools to communicate with the potential buyers, such tools have several defects, including discriminating upon medium-sized and small-sized providers. In general, trust is harder to be established at present situation.
- **Information asymmetry as a barrier:** although many countries do not impose hard border control over fish and fish products, some local government may impose temporary lock-down as a response to the surge of local infected cases. Most of these temporary lock-down is unpredictable. The ability to mitigate risk becomes essential. For fish traders, they may require more local information concerning disruption of supply chain, which is not always accessible due to many reasons, e.g. language, source of information, familiarity with local market, etc.
- **Language as a barrier:** guidance issued by international organizations may not be translated timely at national level. For example, FAO and WHO jointly issued an interim guidance for food businesses on 7 April, which was made available only in English, French, Spanish, Russian and Arabic.⁵² Its Chinese translation was online three weeks later on the website of an academic institute. The message may not be distributed timely and widely, not to mention its information may get lost in translation. To deal with information asymmetries, the national government launched WeChat app to facilitate information exchange.⁵³ The timely communication is proven essential for risk mitigation. However, such online platform is normally in mother tongue (e.g. Chinese). International traders may not have time to translate and figure out the emergence measures.
- **SMEs in pandemic:** the outbreak has a greater impact on SMEs. The vulnerability of SMEs to bear risks are mainly manifested in cash flow tension, information channel limitation, poor self-regulation ability and so on. In response to the crisis, SMEs are lack of good means to deal with, basically can only rely on downsizing, pay cuts and shutdowns. Since SMEs hired a large proportion of labor in the society, once a large number of SMEs' running is inefficient or in danger of collapse, it will cause a lot of social problems.⁵⁴

2.3 Challenges associated with uncertainty on the transmission of virus along cold chain in June and July 2020

- **Description:** cold chain is a special supply chain system used to preserve raw fish,

⁵¹ Zhao Yongqiang, et. al., 'The effect of coronavirus infection pneumonia on China's aquatic products processing industry', 2020, 2 Chinese fishery Economy 38, 30-36. [in Chinese]

⁵² FAO and WHO, 'COVID-19 and Food Safety: Guidance for Food Businesses'. 7 April 2020.

⁵³ FAO, 'WeChat app launched: National Aquatic Product Production and Marketing Platform'. 1 Chinese Fish Price Report 2001, pp.5.

⁵⁴ Wei Qian and Zhang Yu, p.103.

fish fillets, and semi-finished or finished fish products in production, processing, transportation, distribution and sale. It retains food at a low temperature to prevent pollution and deterioration. However, many types of viruses may also survive in a low temperature. When attached to the surface of meat or fish products, they may survive and become reactivate when temperate raise.⁵⁵

- On 12 June, Beijing found four infected cases after 56 days with no new case reported⁵⁶. It was found in a fish & meat wholesale market in Fengtai District. After tested done on 13 June, it found positive reaction to COVID-19 on salmon chopping board and frozen meat imported from Norway.⁵⁷ This has caused concerns over potential transmission of virus along cold chain. According to report by CAPPMA, salmon import from Norway dropped 97% in comparison with last week.⁵⁸ On 10 July, it once again detected positive reaction to COVID-19 on package and inside of cargo from three batches of shrimps sample, imported from Ecuador. This has caused further worries over the potential infection over cold chain.

- **Short-term impact and challenges:** the salmon incident in June at the Wholesale Market in Beijing and the frozen shrimp of Ecuador in July once again attract public attention to the safety of frozen aquatic product. The aquatic products involved in the two incidents were all imported goods. After the incident, salmon and frozen shrimp from Ecuador were removed from shelves in various places, causing losses to retailers and importers. With the expansion of the pandemic in many places around the world, people is become even more sensitive to imported aquatic products. How the Customs and market supervision authorities handle this challenge is critical for the recovery of trade of frozen goods, especially for certain fish species, salmon, shrimps etc. Some measures may cause unnecessary complication and affect trade (e.g. requirement of food safety warranty by the Customs or heavy custom examinations⁵⁹).

- **Long-term impact and challenges:** both the COVID-19 outbreak in Wuhan and Beijing city occurred in wholesale market on raw meat, fish and animals. This alarmed authorities on the potential sanitary issues and the difficulties to trace source of goods in these market. Described as “wet market”, such places have played an important role in distribution of goods such as raw meat, fish and animals in China. The recurrence of infection may call for more comprehensive measures taken in

⁵⁵ Network of Aquaculture Centres in Asia-Pacific, ‘China announces import measures to respond to nucleic acid positives of COVID-19 detected from the outer packaging of frozen white leg shrimp from Ecuador’, 16 July 2020. Link: <<https://enaca.org/?id=1115&title=china-announces-import-restrictions-on-frozen-shrimp-covid-19>>

⁵⁶ Xinhua Network, ‘269 cases after 11 June, Beijing Municipality Report the New Infection Cases’. 25 June 2020. Link: <<https://baijiahao.baidu.com/s?id=1670458307449985454&wfr=spider&for=pc>> [in Chinese].

⁵⁷ Sina Finance, ‘Emergency! Beijing Xinfadi: Chopping Board for Imported Salmon is tested positive for COVID-19 virus’. 13 June 2020.

Link: <<https://baijiahao.baidu.com/s?id=1669365110540410120&wfr=spider&for=pc>> [in Chinese]

⁵⁸ CAPPMA, ‘The trade volume of salmon from Norway plummeted with a 97% shrink in last week’. 30 June 2020. Link: <<http://www.cappma.org/view.php?id=5393>> [in Chinese]

⁵⁹ According to CAPPMA, the customs requires the exporter from Canada to provide a food safety warranty with guarantee of no COVID-19 to the customs before import. Link: <<http://www.cappma.org/view.php?id=5363>> [in Chinese]; each cargo of imported salmon is required test, CAPPMA, ‘every cargo is to be tested in custom, businessman has to wait for the result’. 16 June 2020. Link: <<http://www.cappma.org/view.php?id=5297>> [in Chinese]

those places, or a permanent change of distribution channel.

3. Good practice for trade of fish and fish products in times of crisis and pandemic

- **Overview:** Chinese government has taken many effective measures during this pandemic. The early-warning and control system under the Emergency Response Law, immediate lock-down and social-distancing measures, strict inspection requirements are quite effective in containing COVID-19 infection. In this section, we would like to focus our discussion on the major challenges identified in Section 2.

3.1 Good practice for crisis handling at the beginning of the pandemic

- **An immediate ban on trade and consumption of animals at the very beginning of the crisis:** in facing uncertainty on the origin of virus and its vectors, a temporary ban on consuming and trading of all animals not on the list of LPL was immediately applied. On 21 and 26 January, ministry-level order were jointly issued by State Administration for Market Regulation (SAMR), MARA and NFGA⁶⁰. Many wet markets were temporarily shut down as well. Although the scope of ban is apparently too broad, including all terrestrial species and most aquatic species, it effectively stopped all possible channel for transmission of virus. This ban earned precious time for government to evaluate situation and organize expert assessments on the potential risk.
- **Quick reaction when more information is available about coronavirus:** to minimize the damages caused by the temporary ban, the Standing Committee of National People's Congress soon narrowed the scope of ban in its notice given on 24 February⁶¹. A list of species excluded from the ban has been quickly established. Mechanism has been placed to identify and expand the list of animals allowing for trade. CAPPMA and many other associations also played a very positive role here. By utilizing Apps, they released many articles to promote the trading and consumption of safe aquatic products.

3.2 Good practice for sustaining the supply chain in a prolonged pandemic

- Under the Emergency Response Law, China adopts a grade system with four level of crisis responses. Each corresponds to different control measures. Although no crisis at the scale of this pandemic happened before, experience gained in earthquake, flooding and SARS epidemic in past time has substantially improved China's ability in handling such crisis. Under a governance structure labeled as "big government", the State Council established Joint Prevention and Control Mechanism to coordinate COVID-19 control actions. Under such coordinating mechanism, MARA, the primary responsible department for fish sector, NFGA, Ministry of Commerce (MoC), the Ministry of Transport (MoT), MIIT and their local bureaus, affiliating institutions have jointly adopted a holistic approach in tackling the problems in production, logistics, processing and distribution. It is under such a mechanism that

⁶⁰ See SAMR, MARA and NFGA, A Joint Notice on Strengthening the Supervision of Wild Animal Trade Market and Enhancing Infectious Disease Prevention and Control (GSJMD [2020]2), [in Chinese]; the three institutions jointed issued a second notice on 26th January, announcing a stricter measure on animal trade.

⁶¹ The Standing Committee of NPC, 'The Decision on Prohibiting the Illegal Transaction of Wildlife, Abolishing Edible Use of Wildlife and Protecting Human Health', issued on 24 Feb 2020. [in Chinese]

the pandemic has been brought under rapid and effective control.

- For domestic transportation, feed products, fish fry and fish was included in the emergency transportation coverage of daily necessities, which guarantee its transportation even in areas applied lock-down measures in January. Most provinces and cities in China gradually resumed their transportation since the end of February. On February 21, a teleconference was held to restore traffic order across the country, requiring differentiated regional management and control to break through traffic blocks. In areas with low risk of COVID-19, road traffic restrictions should be lifted to restore normal traffic and transportation order, while in areas with middle and high risks, traffic control measures should be reviewed in light of the epidemic situation. As for cargo transport, transport restrictions on freight vehicles and vessels have been lifted in non-key areas of the epidemic, so as to ensure the inflow of goods and the outflow of products and facilitate the resumption of production.⁶²
- For international transportation, many countries implemented border control policies, suspension of flights and air traffic control policies. In China, the multi-modal freight mode is adjusted well and plays an important role in resolving transportation issues. From China's various logistics hub cities, Sino-Euro, Sino-Asia Cargo Railway now can mainly cover Central Asia, Western Europe and other international and regional, which is expected to extend to West Asia and South Asia and other regions soon.⁶³ In response to a series of problems such as international aviation and maritime transport restrictions during the outbreak, they took the initiative to ensure the stable operation of the delivery during the outbreak. With the strong support from the Customs, a 7x24-hour customs clearance services is applied to ensure the timely flow of goods.⁶⁴
- On March 6, 2020, the GAC issued the List of Measures for Coordinating the Prevention and Control of Port Epidemics and Facilitating Customs Clearance.⁶⁵ There are a total of 50 measures in the list. Among them, 13 are about strengthening supervision to prevent the infection from imported goods or people movement; 16 of them are about simplifying procedures and facilitating customs clearance, such as the implementation of “consignor may not be present” inspection. The persons may notify the customs to not be present for inspections through e-mail, electronic platforms; 15 of them are to strengthen operation of supply chain. Some other measures are taken as well. At some key ports, green channels for importing agricultural products and food is applied; 24-hour appointment clearance is implemented; and inspection and testing for agricultural goods are given priority.⁶⁶

⁶² Sina Network, ‘Normal traffic and transportation will be restored throughout the country’, 14 March 2020. Link: <http://k.sina.com.cn/article_1403611582_53a969be02000uo2g.html> [in Chinese]

⁶³ Information can check Sino-Euro and Sino-Asia Cargo Railway. Link: <<http://cn.cetrains.com/>> [in Chinese]

⁶⁴ Eastday, ‘Considerate customs services have helped the regular operation of china-Europe freight trains’, 14 April 2020. Link: <<http://news.eastday.com/eastday/13news/auto/news/china/20200414/u7ai9217204.html>> [in Chinese]

⁶⁵ Ministry of Justice and GAC, “50” task list to coordinate the prevention and control of epidemics at ports and facilitate customs clearance. 19 March 2020. Link: <http://www.moj.gov.cn/subject/content/2020-03/19/1451_3244360.html> [in Chinese]

⁶⁶ Jinan Customs, ‘Over 50 measures to coordinate port epidemic prevention and control and customs clearance facilitation, and multiple measures to stabilize foreign trade’. 1 April 2020. Link: <http://shanghai.customs.gov.cn/jinan_customs/500341/2710141/2949044/index.html> [in Chinese]

-
- Innovation is also found in using online platform. Online product display, online business negotiation, electronic payment and other digital means are used to carry out trade negotiations and transactions during the pandemic. For example, from May 25 to May 29, Zhejiang Ministry of Commerce held the first online trade fair of aquatic products, the exhibition built an efficient bridge between domestic aquaculture processing enterprises and professional buyers in the Americas through the release of supply and demand information, web carousels of high-quality exhibits, cloud presentation, one-on-one cloud negotiations and other forms.⁶⁷ “Zhi Bo Shou Huo” (Live streaming and Sale) is the other good example. The rationale is that the producer (normally farmer or fishermen) uses popular online platform to broadcast, introducing its farm/fishing activities and products to the potential buyers. Buyers may purchase goods via reliable platform such as Alibaba.com, Taobao.com or JD.com. The boom of this online mode during the pandemic greatly resolve information asymmetry and bring production and market closer. Local government also made policy to facilitate such business mode. For example, on April 15, Ningde City, Fujian Province issued the Six Measures for Ningde City to Support Aquatic Products Trade Companies to Better Development During the Epidemic Period to encourage the use of digital means for sale. Foreign trade enterprises that use online mode to sell aquatic products of more than 30 million yuan will be rewarded with a maximum of ¥1 million.⁶⁸

 - To help SME to return to production and tide over the difficulties, the Ministry of Industry and Information Technology issued a " Notice on the response to the outbreak of new coronavirus pneumonia to help SME to resume production and overcome difficulties.", stating measures including helping enterprises to coordinate the solution of workers return to work, raw materials supply, material transportation and masks and other prevention and control materials security problems, guiding enterprises to carry out production and self-help, implementing periodic deferment of fees of electricity, water and gas. In addition, for fiscal and tax support, local governments introduce relevant fiscal support policies and give full play to the role of special funds for SME.⁶⁹

3.3 Good practice for handling cold chain crisis in June and July 2020

- **Conveying accurate information in a timely manner.** The relevant department held a press conference in time to announce its findings in venue with first infection in June, Beijing. The statement that “there is no evidence to show that the salmon is the host or intermediate host of a novel coronavirus, and these aquatic products were contaminated by a coronavirus rather than infected”⁷⁰ convey accurate and timely

⁶⁷ Xinhua News, ‘Zhejiang Province holds first aquatic product export online fair’, 27 May, 2020,

Link:< <https://baijiahao.baidu.com/s?id=1667811489403962671&wfr=spider&for=pc> > [in Chinese]

⁶⁸ Shuichan Network, ‘Aquaculture Net, Ningde City, Fujian Province introduced six measures to support aquatic product foreign trade companies to better development during the epidemic’. 22 April 2020. Link:<http://www.shuichan.cc/news_view-400571.html> [in Chinese]

⁶⁹ The State Council, ‘The Ministry of Industry and Information Technology issued 20 policies and measures to support SME to resume production and tide over the difficulties’, 10 February, 2020.

Link: < http://www.gov.cn/guowuyuan/2020-02/10/content_5476737.htm > [in Chinese]

⁷⁰ Sina Network, ‘Press Conference on Epidemic in Beijing: Salmon was found to be contaminated, but no virus was detected before entering the contaminated site’, 16 June, 2020.

Link: <https://k.sina.com.cn/article_1914880192_7222c0c002000ub9t.html?from=news&subch=onews> [in Chinese]

information to the market.

- **Cooperation in identifying the risk along the cold chain:** when the risk of virus transmission via cold chain is found, the Customs adopts measures to enhance control while minimize the impact to flow of goods. For example, it manages to obtain more information about the supply, from harvesting to processing on boats/in factories and food safety during transportation.⁷¹ It also communicates with competent authorities of exporting countries on sanitary measures taken in meat/seafood processing and the reported COVID-19 cases among workers.⁷² These cooperation measures allow trade being disrupted to a minimal level.
- **Precautionary measures taken by the market inspection department and the Customs:** when the cold chain event sustained and even escalated in July, the State Council issued emergent order on comprehensive investigation of frozen food and prevention of COVID-19 infection. Market supervision department, in cooperation with commercial, transport and sanitary departments, has organized enforcement actions to check the potential risk in the wholesale market, frozen food market and other food market in July, intended to control the risk of virus transmission via cold chain.⁷³ The Furthermore, they developed cooperation with the Customs to enhance the traceability on imported food after clearance.⁷⁴
- **There is also controversial practice.** After receiving reports from German authority that the pork processing factory had an outbreak of COVID-19 virus among workers, the Customs halted import from such company temporarily⁷⁵. It was followed by more restriction notice on frozen pork, poultry or beef import from companies located in other countries subsequently.⁷⁶ In total there were 23 companies received temporary ban.⁷⁷ We have good reason to believe that China's approach is not a solo in this pandemic. Restrictions like this may be imposed by many countries under concern of potential infection. Could there be alternative measures taken to prevent risk instead of a direct suspension of import? There might be many issues open for discussion.

⁷¹ GAC, 'Press Conference on the Prevention of Virus from Foreign Countries via the Customs, and Work on Strengthening Cold Chain Supervision for Imported Goods'. 10 July 2020.

Link: <<http://fangtan.customs.gov.cn/tabid/1071/Default.aspx>> [in Chinese]

⁷² CAPPMA, '50 cargos of salmons from Chile is on the way to China. The import dropped 34% to 240 tons', 22 June 2020. Link: <<http://www.cappma.org/view.php?id=5341>> [in Chinese]

⁷³ China Food Safety Network, Many Places Organized Check Program on Food Safety. 17 June 2020. Link: <<http://www.cfcn.cn/front/web/site.bwnewshow?pdid=158&newsid=4398>> [in Chinese]

⁷⁴ GAC (Press Conference on the Prevention of Virus from Foreign Countries via the Customs, and Work on Strengthening Cold Chain Supervision for Imported Goods).

⁷⁵ China Economy Network, 'The Customs suspended the import goods from one German Enterprise and its affiliated cutting, storage enterprises', 18 June 2020.

Link: <<https://baijiahao.baidu.com/s?id=1669840312666483502&wfr=spider&for=pc>> [in Chinese]

⁷⁶ GAC, Notices. Link: <<http://www.customs.gov.cn/customs/xwfb34/302425/3153750/index.html>> [in Chinese];

GAC, Notices. Link:

<<http://www.customs.gov.cn/customs/ztl86/302414/302415/gmzy/2879222/3152066/index.html>> [in Chinese]

⁷⁷ GAC (Press Conference on the Prevention of Virus from Foreign Countries via the Customs, and Work on Strengthening Cold Chain Supervision for Imported Goods).

4. An overview of relevant provisions for trade of fish and fish products in times of crisis and pandemic

Since its accession to the WTO, China has actively pursued bilateral and regional trade agreements, concluding RTAs in various regions around the globe, all with varying provisions. Currently, China has nineteen RTAs in operation, with another thirteen under negotiation and another eight under consideration.

Fish and fish products are highly traded with countries that have RTAs in operation with China, such as ASEAN countries, New Zealand, Australia, Iceland, South Korea, Chile, Peru. However, as for other major fishery countries, i.e. US, Canada, EU, Russia, Japan, trade of fish and fish products is comparatively limited due to no RTA has been executed for various reasons.

Among the RTAs implemented, fish and fish products are generally applied zero-tariff, and certain specific species applied normal tariffs (non preferential tariff policy) with a long transition period, e.g. South Korea.

China has chosen to take the narrower model of RTA, which usually focuses on trade in goods only and would expand to trade in services and investment after the commitments on goods have been substantially implemented. Most of the RTAs contain provisions related to customs procedures and cooperation, trade remedies, sanitary and phytosanitary measures, technical barriers to trade, trade facilitation, exceptions etc., with the objective to facilitate trade.

In early 2020, the outbreak of COVID-19 has brought concerns over implementation of certain provisions in trade of fish and fish products, in particular, the “Exception Provision”, “SPS Measures” and “Trade Facilitation Provisions” as trade volume of fish or fish products decreased significantly.

4.1 Exception provisions

Compared with Australia, Canada, India, Japan and Singapore, China has different RTA practice. Some RTAs contain general exceptions and others do not. The contents of the exception provisions are in line with international practice and generally fall into three categories.

The first category includes instruments expressly incorporating GATT Article XX and/or GATS Article XIV. For example, the China-New Zealand RTA contains a general exception which makes express reference to both Article XX of the 1994 GATT and to Article XIV of the GATS. The RTA also clarifies the exception applies, among others, to “environmental measures necessary to protect human, animal or plant life or health”. RTAs only incorporating GATT Article XX and/or GATS Article XIV include China-Singapore RTA, China-Korea RTA, China-Australia RTA, etc..

The second category is agreements that, without making express reference to GATT Article XX and/or GATS Article XIV, were clearly inspired by it and include a similar general list of exceptions. For example, the China-ASEAN RTA has a list of exceptions similar to GATT Article XX.

The third category refers to certain instruments that contains specific clauses or provisions which are generally aimed at promoting a specific legitimate interest, such as national security, the protection of public morality, the protection of human, animal and plant life and health, and the protection of articles of artistic, historical and archaeological value. For example, the Asia-Pacific Trade Agreement states:

*Nothing in this Agreement shall prevent any Participating State from taking action and adopting measures which it considers necessary for the protection of its national security, the protection of public morality, the protection of human, animal and plant life and health, and the protection of articles of artistic, historical and archaeological value*⁷⁸.

It is worth noting, while such provision explicitly promote a specific legitimate interest, GATT/GATS's general exception provision still applies.

The countries concerned can rely upon these exceptions when implementing certain public policy measures that restrict trade. However, as a common issue, GATT Article XX are very broad and lack of specific standard.

4.2 SPS provisions

SPS measure is one of the most controversial issues in trade negotiation. In RTAs endorsed by Chinese government, most SPS provisions refer to WTO SPS Agreement to some extent. New Zealand is the only exception which refines the SPS measures by including a sophisticated risk assessment requirement.

For those observing WTO SPS Agreements, members have the right to take sanitary and phytosanitary measures necessary for the protection of human, animal or plant life or health. In conclusion, such measures shall meet following conditions:

- (a) be consistent with the provisions of the SPS Agreement;
- (b) only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles and is not maintained without sufficient scientific evidence, except as provided in paragraph 7 of Article 5;
- (c) not arbitrarily or unjustifiably discriminate between Members; not constitute a disguised restriction on international trade;
- (d) on international standards, guidelines or recommendations, where they exist, except as otherwise provided;
- (e) are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations.

As per the RTAs and the WTO SPS Agreements, members concerned have to base their SPS measures on international standards. However, when there are no such relevant standards, they shall ensure that their SPS measures are based on appropriate assessment. Where

⁷⁸ Article 35 of Asia-Pacific Trade Agreement.

relevant scientific evidence is insufficient, a member may provisionally adopt SPS measures based on available pertinent information, including that from relevant international organizations, as well as from SPS measures applied by other members.

A serious constraint faced by all the countries was the lack of adequate information on SPS measures (e.g., on plant/animal health status and treatments), both at national and regional levels. According to WTO, SPS notifications has become the largest group of notifications received in recent years. In this COVID-19 pandemic, some frequently criticized problems in SPS surface again. Many countries submit notification and tighten border control without a proper notice.

4.3 Trade facilitation provisions

Trade facilitation is recognized by government as an important aspect of trade policy. Most RTAs with China as a party contain trade facilitation measures. The aim is to ensure that the Customs procedures and practice are predictable, uniform and transparent. However, due to a lack of common terminologies, and varied “scope, precision and level of ambition” at RTA level, trade facilitation measures were not consistent in different RTAs⁷⁹.

In light of this, WTO Trade Facilitation Agreement (“TF Agreement”) was concluded in 2013 (took effect from 2017), which represents a major milestone.⁸⁰ It includes a wide range of measures, covering matters mainly relating to release and clearance of goods, fees and formalities connected with importation and exportation, and publication and administration of trade regulations. China ratified TF Agreement in 2013, and made 100% rate of implementation commitments for prescribed measures.

During this pandemic, some notable trade facilitation measures, primarily risk management, disposal of perishable goods, test procedures, electronic measures for clearance, border cooperation are under test for its effectiveness in facilitating trade in times of crisis. From WTO database, we find that countries committing to relevant provisions accounts for 67%~80% of WTO member states.

The other important international agreement is International Convention on the Simplification and Harmonization of Customs Procedures (“Revised Kyoto Convention”) established under the auspices of the World Customs Organization (WCO). It provides specific standards to simply and harmonize Customs procedures. Contracting party may opt to any specific annex.

5. Discussion and analysis

Goods trade, as a human activity which can be traced back to very ancient time, its agreement has been developed to a very advanced level. Many issues have been thoroughly examined. From a legal perspective, we find that many problems surfaced in this pandemic are not novel. The outbreak of COVID-19 may just exposes some intrinsic problems in trade agreements again.

⁷⁹ Nora Neufeld, ‘Trade Facilitation Provisions in Regional Trade Agreements: Traits and Trends’, WTO Staff working paper ERSD-2014-01. 16 Jan. 2014.

⁸⁰ WTO news, ‘WTO’s Trade Facilitation Agreement Enters into Force’, 22 Feb 2017. Link: <https://www.wto.org/english/news_e/news17_e/fac_31jan17_e.htm>.

However, the scale of crisis and many on-going issues remind us that it might be time to change⁸¹. China's experience in handling trade of fish and fish products may not be the most striking or remarkable episode in this pandemic, but from above investigation, we are able to identify several interesting and important implications relating to trade agreements and capacity building at national level.

5.1 Invoking exception clause and SPS requirements under uncertainty

GATT Article XX(b) incorporated by many RTAs prescribes circumstances that countries may impose restrictive measures “necessary to protect human, animal or plant life or health”⁸². From its literary meaning, the health concerns brought by COVID-19 virus are well falling into its scope of application. However, a careful reading of the drafting history of Article XX(b), the purpose of this provision, the interpretation and case law shows that discussion and analysis are not particularly targeting present situation⁸³. For example, it has addressed issues on the imposition of restriction due to potential health risk caused by alcoholic beverages and cigarettes⁸⁴, and on the scope of protection extending to human, animal or plant life or health outside the jurisdiction of contracting party. Justification of exception under uncertainty is not well developed.

As for invoking SPS agreement, measures are required to be “based on scientific principles and is not maintained without sufficient scientific evidence”.⁸⁵ As mentioned above, international standards or appropriate risk assessment is always considered as an important condition for imposing restrictive measures. For example, in WTO dispute between Canada and the U.S. over salmon import, whether risk assessment is justifiable is a focal point.⁸⁶ So is the New Zealand and Australia dispute over apple import ban, or the dispute between the U.S. and India over poultry import ban.⁸⁷ Risk assessment or international standard always play an important role. However, in current event, it finds that neither CODEX, WHO nor OIE guidance is able to play its usual role. Up until July 2020, almost no guidance is issued in consideration of the risk of animal-related infection and risk assessment on goods trade. As a consequence, certain countries made notification on import restriction or tightened quarantine requirements based on its unilateral judgments. Some measures are apparently unjustified.

The cold chain event in June 2020 reflects the complex of the issue. Chinese government temporarily banned the import of frozen meat, fish and shrimps from certain companies in fear of infection⁸⁸. In this event, Chinese government is not obliged to make notification to WTO, as the ban is not targeting a particular category of goods or country, but companies

⁸¹ The COVID-19 pandemic is substantially different from 08-09 financial crisis or Ebola outbreak. See an initial assessment by R. Baldwin and E. Tomiura, ‘Thinking ahead about the trade impact of COVID-19’, in Economics in the Time of COVID-19. CEPR Press e-book, pp. 59-72.

⁸² Article XX(b) of GATT

⁸³ See WTO, Analytical Index of the GATT. Accessed on 15 July 2020. Link:

<<https://docs.wto.org/gtd/Default.aspx?pagename=GATTanalyticalindex&langue=e>>

⁸⁴ See WTO Panel Report, ‘Japan - Customs Duties, Taxes and Labelling Practices on Imported Wines and Alcoholic Beverages’, L/6216, adopted on 10 November 1987, 34S/83; WTO Panel Report, ‘Thailand - Restrictions on Importation of and Internal Taxes on Cigarettes’, DS10/R, adopted on 7 November 1990, 37S/200.

⁸⁵ Article 2.2 of SPS Agreement.

⁸⁶ WTO Dispute, Australia-Measures Affecting Importation of Salmon, DS18.

⁸⁷ WTO Dispute, Australia-Measures Affecting the Importation of Apples from New Zealand, DS367; WTO Dispute, India-Measures concerning the Importation of Certain Agricultural Products, DS430.

⁸⁸ GAC (Press Conference on the Prevention of Virus from Foreign Countries via the Customs, and Work on Strengthening Cold Chain Supervision for Imported Goods).

with report of “cluster of infection” in their producing or processing work⁸⁹. We have good reason to believe that similar measures (temporary ban against a particular company or batch of goods) are applied in some other countries, e.g. export of medical supplies to other countries encountered temporary ban albeit under a different regime (TBT).

Here it is not intended to blame any particular action, but it notes an urgent need to clarify criteria and procedures to apply restrictive measures under uncertainty. In this regard, we note the requirement of “necessity” set out in the exception provision. In 1990 Panel Report of “Thailand - Restrictions on Importation of and Internal Taxes on Cigarettes”, the Panel held “a contracting party cannot justify a measure inconsistent with other GATT provisions as ‘necessary’ in terms of Article XX(d) *if an alternative measure which it could reasonably be expected to employ and which is not inconsistent with other GATT provisions is available to it.*”⁹⁰ This formulation may be applicable to Article XX(b) as well. Therefore, we believe it has no reason for countries to adopt measures without a proper consideration of the necessity requirement in present pandemic.

5.2 Consideration of transitional measures when temporary restrictive measures are imposed

Worries about the sudden change of border policy and potential lock-down may cause reluctance to trade goods involving long distance transportation. This is even truer for goods with a high cost for or difficulty in preservation. For example, as we noted above, it may explain to some extent why fish imported from Chile dropped substantially.

From a legal perspective, in accordance with international trade practice, risk of loss or damage to cargo under long-distance transportation usually pass from the seller to the purchaser in accordance with the contracts (e.g. the time when the cargo is loaded on board or is delivered to the site designated by the purchaser). As such risk in situation like pandemic is usually not covered under the marine insurance policy, the parties concerned may be reluctant to take the risks to perform sales contract. In case actual economic losses incur, costs to settle dispute may be high due to various reasons, e.g. difficulties to establish a *force majeure* situation.

Therefore, for events such as COVID-19, it might be more efficient to implement an equivalent “transitional measure” between the countries, a policy strictly applied to on-road goods and cargo in-transit which may be subject to economic losses due to a sudden adjustment of border control or lock-down.

There is a long tradition to protect legitimate expectation under similar circumstances. For example, in EU, for expectations arising from legislative rules, the European Court of Justice (ECJ) has judged in favor of safeguarding specific interests affected by the new rule. In *Sofrimport v Commission*, the import of dessert apples originating in Chile was suspended by a newly published regulation. The plaintiff *Sofrimport* had shipped a cargo of apples from Chile before the issuance of the regulation. In deciding whether such reliance interests should be protected, the Court gave opinion that goods in transit relying on a legitimate expectation

⁸⁹ China Economy Network (The Customs suspended the import goods from one German Enterprise and its affiliated cutting, storage enterprises)

⁹⁰ WTO, Panel Report on “United States - Section 337 of the Tariff Act of 1930”, L/6439, adopted on November 1989, para. 5.26.

should be exempted from the suspension measure.⁹¹ There is also discussion around “transitional measures” in national context. For example, “grandfather clause” prescribes that in applying new rules it should always accompany a transitional measure⁹². Transitional policy also widely used in EU context, especially for energy market.⁹³

It is useful to consider whether the transitional mechanism in these measures may be taken as reference to present situation. For countries with important mutual trade interests, they may reach equivalent transitional measures under strict circumstances to mitigate the risk associated with long distance transportation.

5.3 Compatibility of national regulation with WTO and CITES in animal-related trade

Animal-related trade in a post COVID-19 world is facing a full adjustment for China and some Southeast Asian countries. China and Vietnam have both announced its intention to imposing ban relating to wildlife trade. The newly promulgated Regulation in Guangdong Province may give some clues. Guangdong is a place with long tradition of using wildlife and breeding “wildlife”. In Article 2 of the Regulation on Wildlife Protection in Guangdong Province of 2020 (RWPGP), the scope of application of law is expanded from Rare and Endangered Animals (REA) in the national and provincial list to any “territorial wildlife with important ecological, scientific and social value”.⁹⁴ A comprehensive ban is applied to animals prescribed in article 2.⁹⁵ Edible use of all animals prescribed in article 2 is prohibited, including breeding animals not in LPL.⁹⁶ Any person is not allowed to provide convenience to purchase, sell or transport these animals without permits as well.⁹⁷

	Tier 1 REA (consistent with Appendix-I Species in CITES)	Tier 2 REA (consistent with Appendix-II Species in CITES)	Other terrestrial species included in protection*
Species	Around 19 species at national level	Around 95 species at national level	Around 620 species
	Around 76 species at provincial level		

*: only some species will be included into OTS, but at present a list of OTS is not published.

(REA and other terrestrial species in Guangdong Province)⁹⁸

According to the table, there is potentially around 620 species to be adjusted into scope of protection in Guangdong. As we discussed in Section 2.1, there are also concerns on adjusting some species from category of terrestrial species to aquatic species, or *vice versa*. Moreover, there is tendency to tighten regulation on certain aquatic species (e.g. some invertebrates). From an international perspective, it may affect two aspects of law: firstly, the tightened requirements under national law may impact the implementation of CITES. China may be required to notify and negotiate the change of regulation. Furthermore, it may contribute to

⁹¹ C-152/88 Sofrimport v Commission [1990] ECR I-2477.

⁹² S Shavell, ‘On Optimal Legal Change, Past Behavior, and Grandfathering’ (2008) 37 Journal of Legal Studies 37

⁹³ C-347/06 ASM Brescia SpA v Comune di Rodengo Saiano [2008] ECR I-5641.

⁹⁴ Article 2 of RWPGP

⁹⁵ Article 23 of RWPGP

⁹⁶ Chapter Six of RWPGP

⁹⁷ Article 24 ~28 of RWPGP

⁹⁸ The data is collected from news published by Guangdong Government website and news on Second Investigation of Wildlife and plants in Guangdong 2017.

Link: <http://www.gd.gov.cn/gdywdt/zfjg/content/post_2926804.html>.

the present fragmented regulation of breeding “wildlife” market, such as differentiation of wildlife from breeding ones, labeling, and utilizing purpose control etc..⁹⁹ Secondly, since there are some species not included in CITES appendix currently, the implication of market access issues along with the tightened regulation may be addressed in the context of WTO.

In this regard, although there is little actual dispute between multilateral environmental agreements (MEAs) and WTO until now, in the dispute case Chile-Swordfish, their relation is described as “complexity”¹⁰⁰. With a tradition of using live animals in certain Asian countries, the imposition of comprehensive ban by China and possible tightened control in other Asian countries, may trigger concerns on what animal can be traded and on what purpose (edible is apparently prohibited). A more controversial issue might be the implication of breeding “wildlife” in locals and its implication for poverty alleviation. It is quite a tradition for some places to sell breeding animals not typically poultry and livestock in part of Asia. Whether such initiative is justified as “trade opportunities for sustainable growth” and compatible with wildlife protection may be challenged.

5.4 A test for implementation of Trade Facilitation agreement in crisis

For trade of fish and fish products, provisions on “perishable goods”, “risk management”, “test procedure”, “cooperation between the Customs”, and “digital trade” are noted. This COVID-19 outbreak may give a chance to test how this newly implemented TF Agreement is operated in practice. We are unable to give a comprehensive assessment of China’s performance in the period of this pandemic, but some observation may give insights. Firstly, the information asymmetry is still a problem for importers and exporters. While the TF Agreement requires the setup of the enquiry point to “answer reasonable enquiries of governments, traders, and other interested parties” on national law and policies, we find these enquiry points may not supply sufficient and timely information on measures taken in times of pandemic. Especially for lock-down measures in certain provinces which may directly or indirectly affect the trade of fish and fish products. When taking such measures, the country concerned should have foreseen that such measures may have adverse impact on the trade of fish and fish products. However, few formal notices have been issued by the Customs or competent authorities to notify the trade companies of counter-party. Language barrier may further exacerbate the situation. Some enterprises (SMEs in particular) may not be able to access local information on COVID-19 related control measures.

Secondly, events like cold chain crisis identified above have been considered as serious risk for COVID-10 control. Except establishing better SPS requirements under uncertainty, how the risk management is made in such circumstances is a big question. According to TF Agreement and Revised Kyoto Convention, risk management shall be “on an assessment of risk through appropriate selectivity criteria”¹⁰¹ and with “a compliance measurement strategy”¹⁰². However, in reality we found the judgment is still under great discretion. There is risk that such power being abused.

⁹⁹ The situation to regulate breeding “wildlife” is described as “no single consistent and coherent framework exists” by CITES. See CITES Cross-cutting Issues, ‘Captive-produced animals and artificially propagated plants’. Link: <<https://cites.org/eng/prog/captive-breeding>>. Accessed on 21 July 2020.

¹⁰⁰ WTO Dispute, Chile - Measures affecting the transit and importing of swordfish, DS193.

¹⁰¹ Article 7.4 of TF Agreement.

¹⁰² Standard 6.5 of Chapter 6, the General Annex of International Convention on the Simplification and Harmonization of Customs Procedures (as amended)

Thirdly, cooperation between border agencies became extremely important at present. The notification given by German authority to China's Customs on infection cases in processing factory effectively prevented the risk of virus transmission via cold chain. This cooperation may be required to extend between the Customs and domestic authorities, especially in sharing information on food safety control or infection condition of certain working places.

5.5 Wholesale market comes to the center of discussion

The wholesale market and retailer for raw meat and fish in China are different from many US and European countries. Many of them are "wet market". The outbreak of COVID-19 and its recent outbreak in Beijing were both in wet market. Although we could not conclude that these wet markets contribute to the spread of the virus, they may potentially create an easy contagious route. Actually, wet market causes worry among consumers concerning food safety (especially raw meat and fish)¹⁰³.

As we described above, in light of the worried sanitary conditions in these markets, many local governments conducted check programs on sanitary measures taken in these places, and required daily disinfection in some, or even shut down a few temporarily¹⁰⁴. However, these campaign-styled actions may not be a permanent solution. For fish and fish products, we note that the regulation on wholesale market is particularly weak. There could be places that illegal, unreported and unregulated fishes sold; the business mode of many stalls renders it almost impossible to trace the source of goods; some illegal trading of wildlife and breeding "wildlife" happens in these markets.¹⁰⁵ It is also doubted whether such places satisfy the sanitary conditions suggested by WHO on 7 April 2020. We hope that this COVID-19 brings a window time to reform these wet markets. Actually, some measures taken by market inspection department indicates such an intention.¹⁰⁶

5.6 The boom of digital trade and its implication for RTAs

There are many successful stories on using online platforms to promote sales. We found that it may be more effective in facilitating transaction in domestic markets than those across border. There are several reasons: firstly, businesses generally have more concerns over the credibility of the sellers across border. The domestic regulation and policies of exporting countries matter. Secondly, the transaction costs are much higher for digital trade across border. In domestic market, some big e-commerce platforms set up mechanisms to mitigate potential risk and secure transaction. However, there are only two RTAs which exclusively set up stand-alone chapters on e-commerce. Many "soft infrastructures", such as consumer protection, digital certificates, electronic authentication, and paperless trade facilitation are still under developed.¹⁰⁷

¹⁰³ A description of wet market in China and why it is important can see Helen Raleigh, 'Why China Shouldn't Shut Down All its Wet Markets', 29 April 2020.

Link: <<https://thefederalist.com/2020/04/29/why-china-shouldnt-shut-down-all-its-wet-markets/>>

¹⁰⁴ Beijing Evening, 'Four Major Wholesale market for fish and meat are temporarily closed ', 13 June 2020. Page02. [in Chinese]

¹⁰⁵ Yang Liu, 'Study on Food Safety Supervision System in People's Republic of China', 2015, PhD Thesis (Wuhan University). [in Chinese].

¹⁰⁶ The State Council Joint Prevention and Control Mechanism, Notice on Conducting Risk Check for Frozen and Chilled Meat (including aquatic products), 14 July 2020.

¹⁰⁷ Gloria O Pasadilla, 'E-commerce provisions in RTAs: Implications for negotiations and capacity building', 2020, UNESCAP Working Paper, No.192.

6. Recommendations for negotiation and capacity building

- **Recommendations for negotiation: set up criteria for restrictive measures under uncertainty.** Requirement of “necessity” for countries to take unilateral restrictive measures shall be further elaborated in GATT Article XX(b). Moreover, the note “*Streamlined Mechanism for Reconciling the Interests of Contracting Parties in the Event of Trade-Damaging Acts*” given by WTO Council in 1989 might be a good starting point to further develop criteria for initiating restrictive measures under uncertainty, i.e. “(1) A measure taken by an importing contracting party should not be any more severe, and should not remain in force any longer, than necessary to protect the human, animal or plant life or health involved, as provided in Article XX(b). (2) The importing contracting party should notify the Director-General as quickly as possible. A notification by telephone should be followed immediately by a written communication from the importing contracting party, which would be circulated to contracting parties. (3) The importing contracting party would be expected to agree to expeditious informal consultations with the principally concerned contracting party as soon as a trade-damaging act has occurred, with a view to reaching a common view about the dimension of the problem and the best way to deal with it effectively”.¹⁰⁸ In particular, its procedural requirement of “informal consultation” with the contracting parties might be incorporated in trade agreement.
- **Recommendations for negotiation: adopt more flexible dispute resolution mechanism in RTAs.** With the objective to quickly resolve dispute between the countries concerned, it may be possible to introduce dispute adjudication board mechanism into the RTAs. By providing all disputes shall firstly be referred to adjudication by a dispute adjudication board (DAB) (consist of senior experts in relevant field), it may be helpful for the countries concerned to settle their dispute at early stage by referring to and evaluating on the unbinding adjudication issued by DAB before bring any action in the courts. This is especially important when there is high uncertainty and the countries concerned may give up its intention of action after evaluating the potential result by referring to the adjudication. Experts (e.g. health or infection) will be more capable of judging the situation than the Customs personnel.
- **Recommendations for negotiation: impose transitional measures for cargo “in transit” and “on-road” trucks.** Countries may set up mutual transitional measures for certain goods which may be adversely affected due to sudden change of border clearance procedure or lock-down. The purpose is to lower down risk brought by long distance transportation. Such measures may set up strict criteria for goods which are eligible to the benefits under transitional measures, such as those on-road trucks or cargo in transit. Furthermore, it should be aware of not causing discrimination against other trading partners.
- **Recommendations for negotiation: countries may enhance cooperation in live animal-related trade negotiation and avoid incompatibility with CITES.** It recommends that China communicates its newly imposed wildlife protection measures with CITES and WTO as soon as possible. It may also share its new rules and experience in regulating breeding animals not falling the category of livestock and poultry, and propose more strict measures taken by CITES in combating illegal animal trade activities

¹⁰⁸ WTO (Analytical Index of the GATT), p.572

in this aspect. Moreover, it may have to evaluate the implication of national regulation on international animal trade in the context of WTO, clarify the scope of ban and avoid unnecessary impact on the trade activities under RTA.

- **Recommendations for negotiation: provisions to facilitate trade may be improved by incorporating considerations as follow:** (1) enhance information exchange on measures which potentially impact trade, including those not traditionally included in Section 1.1 of TF agreement but substantially influence the flow of goods, e.g. lock-down measures by local government or communities which may adversely affect the trade of fish and fish products, and relevant measures local government may take to promote the trade, which including measures for encouraging consumption, facilitation of inland transportation; (2) enhance the use of enquiry points to communicate important notice, exchange information in times of crisis, as stipulated on Section 1.3 of TF agreement; (3) require more notifications being made in more languages than Chinese; (4) revise provisions on disposal of perishable ones that reduced charges applies in times of crisis and pandemic; (5) further clarify the criteria of risk management by drawing experience from COVID-19 pandemic, in particular avoid arbitrary restriction with too much discretion by the Customs; (6) insert provision that border agency cooperation shall include facilitating communication with relevant domestic authorities to avoid unnecessary delay of trade in times of crisis (e.g. strengthen mutual administrative assistance agreements to include cooperation to reduce domestic transport disruption as provided in 6.7 of Revised Kyoto Convention General Appendix). More importantly, it is believed that all above suggestions could be better achieved in RTAs, since the negotiation is normally with more flexibility than those multilateral arrangements.
- **Recommendations for negotiation:** develop a separate chapter on digital trade in RTAs. This pandemic has seen the boom of digital trade. However, the development of digital trade is more rapid than in international trade. There are still barriers which potentially increase risk and costs. It is suggested a separate chapter on digital trade to be developed, primarily stipulating on aspects of consumer protection, digital certificates, electronic authentication, and paperless trade facilitation.
- **Capacity building: measures taken to transform wholesale market for raw meat and fish to improve food safety.** Measures can be taken to improve sanitary condition in wholesale market, especially the “wet market”, to avoid any potential risk of infection or cross-infection. A better traceability system with transparency is required to be built up, which will allow authority better target problematic goods. After experiencing too many wholesale market halting, it might also require a better backup plan in future to minimize the disruption caused by collapse of such distribution hub in locals.

7. Concluding remarks

On 16 July 2020, China announced its second quarter GDP with a growth rate of 3.2%, which is considered as “one of the world’s earliest signs of recovery from the fallout of the coronavirus pandemic”.¹⁰⁹ It is encouraging at this gloomy moment. As the kernel of trading

¹⁰⁹ Thomas Hale and Xinning Liu, ‘Chinese GDP grows 3.2% in second quarter’, Financial Times, 16 July 2020. Link: <<https://www.ft.com/content/4a0f9dca-b48c-453f-bfc1-2c6c8b55682a>>.

activities for many sectors, this will undoubtedly contribute to a gradual recovery of world economy.

This pandemic will end at some point. The post-pandemic world may need more attention. In this study, we have identified several crucial changes, such as the distribution channel changing from offline to online, permanent change of animal trade and consumption in Asian market, and potential reforms in sanitary requirements. Like an old saying goes, ‘there is always opportunity in every crisis.’ We believe this one is with no exception. Actually, good practice has been seen to rebuild international trade network amid the crisis. ASEAN countries, Australia, China, Japan, Korea and New Zealand express will to promote the signature of Regional Comprehensive Economic Partnership this year as a “clear signal of our unwavering support for the multilateral trading system”¹¹⁰. It has seen the trade of fish and fish products expanded quickly in ASEAN countries¹¹¹. In addition, China is actively engaged in negotiating China-Japan-Korea RTA, which may substantially lower the present tariff on fish and fish products¹¹². These initiatives will reflate the free trade in the region.

It is our duty to avoid any action which may further isolate countries from countries at this moment. The tendency to adopt protectionist approach should be avoided. Hopefully the insights revealed in this study contribute to finding a better solution to future trade agreement, as well as capacity building at national level.

¹¹⁰ Joint Media Statement of the 10th Regional Comprehensive Economic Partnership Inter-sessional Ministerial Meeting, 23 June 2020.

¹¹¹ CAPPMA, ‘Import from Vietnam increased 20%. Shrimps and Basa (*pangasius bocouti*) are main species’. 31 May 2020. Link: <www.cappma.org.cn/view.php?id=5187> [in Chinese]

¹¹² China News Network. ‘Li Keqiang: Actively Engage in Negotiating China-Japan-Korea Free Trade Zone’, 29 May 2020. Link: <http://fta.mofcom.gov.cn/article/fzdongtai/202005/42419_1.html>

List of Reference

Research paper and report

- (1) Baldwin, R. & Tomiura, E., 'Thinking ahead about the trade impact of COVID-19', in *Economics in the Time of COVID-19*. (CEPR Press e-book, 2020)
- (2) CAPPMA, *Investigation Report on the Impact of COVID-19 on Fish Processing Sector*. (Online repository, March 2020) [in Chinese]
- (3) Chen, S.P., 'Analysis of the impact of china's international trade in aquatic products under the outbreak of the CONVID-19 Virus'. 2020. *Scientific Fish Farming* 4, p.3-4. [in Chinese]
- (4) FAO, *Chinese Fish Price Report*. (FAO Report Issue 1/2020, 2020)
- (5) FAO, 'Summary of the Impacts of the COVID-19 Pandemic on the Fisheries and Aquaculture Sector'. Addendum to *the State of World Fisheries and Aquaculture 2020*. (FAO Report, 2020)
- (6) FAO, *the Impact of COVID-19 on Fisheries and Aquaculture-a Global Assessment from the Perspective of Regional Fishery Bodies*. (FAO Report No.1, May 2020)
- (7) Fisheries Administration of Agriculture and Rural Departments, National Aquatic Technology Extension Station & Chinese Fisheries Society, *China Crayfish Industry Development Report 2019*. (online repository, September 2019). Link: <<http://www.cappma.org/view.php?id=3669>> [in Chinese]
- (8) Hanson, A. et. al., *Greening China's Fish and Fish Products Market Supply China*. (SSID Report, 2011)
- (9) Li, W.J., 'Meat Research, Deep Processing and Quality Safety Analysis of Aquatic Products in my country-An Interview with Professor Xue Changhu from Ocean University of China'. 2018 . 2 *Meat Research* 32, p.11-14. [in Chinese]
- (10) Liu, Z.X. et. al., 'Composition and Divergence of coronavirus spike proteins and host ACE2 receptors predict potential intermediate hosts of SARS-CoV-2'. 2020. 6 *Journal of Medical Virology* 92, p.595-601.
- (11) Neufeld, N., *Trade Facilitation Provisions in Regional Trade Agreements: Traits and Trends*. (WTO Staff working paper ERSD-2014-01, Jan. 2014)
- (12) Shavell, S., 'On Optimal Legal Change, Past Behavior, and Grandfathering'. 2008. 1 *Journal of Legal Studies* 37, p. 37-85.
- (13) Shi L., Liu L.T., & Qin H., 'Development of Fisheries Industry under COVID-19: Impact, Countermeasure and Long-term Impact'. 2000. 1 *China Fisheries Economy* 38, p.2-7. [in Chinese]
- (14) The Fisheries Administration of the Ministry of Agricultural and Rural Affairs and China Society of Fisheries, *China Fishery Statistical Yearbook 2020*. (China Agriculture Press,

2020)

- (15) Watters, L. & Wang, X., 'The Protection of Wildlife and Endangered Species in China'. 2002. 3 *Georgetown International Environmental Law Review* 14, p.489-524.
- (16) Wei, Q. & Zhang, Y., 'Impact of COVID-19 on China's imports and exports in 2020 and countermeasures'. 2020. 2 *Journal of Shandong University of Administration* 171, p.96-104 [in Chinese]
- (17) WTO OMC, *Report on G20 Trade Measures: Mid-October 2019 to Mid-May 2020*. (WTO Report, 29 June 2020), p.52-53.
- (18) WTO, *Japan - Customs Duties, Taxes and Labelling Practices on Imported Wines and Alcoholic Beverages*. (WTO Panel Report L/6216, 10 November 1987).
- (19) WTO, *Thailand - Restrictions on Importation of and Internal Taxes on Cigarettes*. (Panel Report DS10/R, 7 November 1990, 37S/200).
- (20) WTO, *Trade and Environment at WTO*. (Online repository, April 2004)
- (21) WTO, *United States - Section 337 of the Tariff Act of 1930* (Panel Report L/6439, November 1989)
- (22) Yang, L., *Study on Food Safety Supervision System in People's Republic of China*. (PhD Thesis, Wuhan University, 2015). [in Chinese]
- (23) Yu, W.X., 'On Legal Path of Wildlife Conservation: From The Perspective of Exceeding Utilitarianism'. 2017. 5 *China Legal Science* p.31, 33-36. [in Chinese]
- (24) Zhang, F. & Tang, J.J., 'Crisis and Turnaround: The Rescue Strategy of China's foreign trade Enterprises in the context of global epidemic spread'. 2020. *Contemporary Economic Management* 42, online. [in Chinese]
- (25) Zhao, Y.Q., et. al., 'The effect of coronavirus infection pneumonia on China's aquatic products processing industry'. 2020. 2 *Chinese fishery Economy* 38, 30-36. [in Chinese]

Cases

- (26) WTO Dispute, Australia-Measures Affecting the Importation of Salmon, DS18
- (27) WTO Dispute, Australia-Measures Affecting the Importation of Apples from New Zealand, DS367
- (28) WTO Dispute, Chile - Measures affecting the transit and importing of swordfish, DS193
- (29) WTO Dispute, European Communities - Measures concerning Meat and Meat Products (Hormones), DS26
- (30) WTO Dispute, India-Measures concerning the Importation of Certain Agricultural Products, DS430
- (31) ECJ, C-152/88 Sofrimport v Commission [1990] ECR I-2477

(32)ECJ, C-347/06 ASM Brescia SpA v Comune di Rodengo Saiano [2008] ECR I-5641

Newspaper and online articles

- (33)Aquaculture Network, ‘U.S. demand for small tilapia increased after the tariff exemption’. 15 July 2020. Link: <http://www.shuichan.cc/news_view-404810.html> [in Chinese]
- (34)Beijing Evening, ‘Four Major Wholesale market for fish and meat are temporarily closed’. 13 June 2020. Link: <http://bjwb.bjd.com.cn/html/2020-06/13/content_12466479.htm> [in Chinese]
- (35)CAPPMA, ‘50 cargos of salmons from Chile is on the way to China. The import dropped 34% to 240 tons’. 22 June 2020. Link: <<http://www.cappma.org/view.php?id=5341>> [in Chinese]
- (36)CAPPMA, ‘every cargo is to be tested in custom, businessman has to wait for the result’. 16 June 2020. Link: <<http://www.cappma.org/view.php?id=5297>> [in Chinese]
- (37)CAPPMA, ‘Import from Vietnam increased 20%. Shrimps and Basa (pangasius bocouti) are main species’. 31 May 2020. Link: <www.cappma.org.cn/view.php?id=5187> [in Chinese]
- (38)CAPPMA, ‘Some Canadian exporters refuse to sign the safety undertaking, saying that it is not of an official nature’. 24 June 2020. Link:<<http://www.cappma.org/view.php?id=5363>> [in Chinese]
- (39)CAPPMA, ‘The trade volume of salmon from Norway plummeted with a 97% shrink in last week’. 30 June 2020. Link: <<http://www.cappma.org/view.php?id=5393>> [in Chinese]
- (40)China Economy Network, ‘The Customs suspended the import goods from one German Enterprise and its affiliated cutting, storage enterprises’. 18 June 2020. Link: <<https://baijiahao.baidu.com/s?id=1669840312666483502&wfr=spider&for=pc>> [in Chinese]
- (41)China Food Safety Network, ‘Many Places Organized Check Program on Food Safety’. 17 June 2020. Link: <<http://www.cfcn.cn/front/web/site.bwnewshow?pdid=158&newsid=4398>> [in Chinese]
- (42)China News Network, ‘Li Keqiang: Actively Engage in Negotiating China-Japan-Korea Free Trade Zone’. 29 May 2020. Link: <http://fta.mofcom.gov.cn/article/fzdongtai/202005/42419_1.html> [in Chinese]
- (43)Eastday, ‘Considerate customs services have helped the regular operation of china-Europe freight trains’. 14 April 2020. Link: <<http://news.eastday.com/eastday/13news/auto/news/china/20200414/u7ai9217204.html>> [in Chinese]

-
- (44) Feng, E. & Cheng, A., 'Pandemic Causes China to Ban Breeding of Bamboo Rats and Other Wild Animals'. NPR Coronavirus Crisis. 28 June 2020.
Link: <<https://www.npr.org/sections/goatsandsoda/2020/06/28/883900042/pandemic-causes-china-to-ban-breeding-of-bamboo-rats-and-other-wild-animals>>
- (45) GAC, Notice. Link:
<<http://www.customs.gov.cn/customs/xwfb34/302425/3153750/index.html>> [in Chinese].
- (46) GAC, Notice. Link:
<<http://www.customs.gov.cn/customs/ztl86/302414/302415/gmzy/2879222/3152066/index.html>> [in Chinese]
- (47) GAC, 'Press Conference on the Prevention of Virus from Foreign Countries via the Customs, and Work on Strengthening Cold Chain Supervision for Imported Goods'. 10 July 2020. Link: <<http://fangtan.customs.gov.cn/tabid/1071/Default.aspx>> [in Chinese]
- (48) Hale, T. & Liu, X.N., 'Chinese GDP grows 3.2% in second quarter'. Financial Times. 16 July 2020. Link:
<<https://www.ft.com/content/4a0f9dca-b48c-453f-bfc1-2c6c8b55682a>>.
- (49) INFOFISH, 'India and Ecuador: When COVID-19 Makes Harvest and Processing of Prawn Complicated'. 29 April 2020. Link:
<<http://infofish.org/v3/index.php/component/k2/item/206-india-and-ecuador-when-covid-19-makes-harvest-and-processing-of-prawn-complicated>>
- (50) Network of Aquaculture Centres in Asia-Pacific, 'China announces import measures to respond to nucleic acid positives of COVID-19 detected from the outer packaging of frozen white leg shrimp from Ecuador'. 16 July 2020. Link:
<<https://enaca.org/?id=1115&title=china-announces-import-restrictions-on-frozen-shrimp-covid-19>>.
- (51) News, 'Illegal consumption of more than 900 wild animals will be fined up to 10,000 yuan'. Official website of Guangdong Government. 10 March 2020. Link:
<http://www.gd.gov.cn/gdywdt/zfjg/content/post_2926804.html>.
- (52) News, 'More than 20 Countries and Regions adopted import & export restrictions for goods and people'. Official website of Hainan Committee of CCPIT. 21 Feb 2020. Link:
<<http://www.ccpithn.org/index.php?m=content&c=index&a=show&catid=35&id=2055>>
- (53) News, 'Press Conference - Jiang Kaiyong, Deputy Director of the Fishery Administration answered questions on the situation of ensuring stable production and supply of aquatic products'. Official website of MARA. 24 February 2020. Link:
<http://www.moa.gov.cn/xw/bmdt/202002/t20200224_6337617.htm> [in Chinese]
- (54) News, 'The Ministry of Industry and Information Technology issued 20 policies and measures to support SME to resume production and tide over the difficulties'. Official website of the State Council. 10 February, 2020. Link: <
http://www.gov.cn/guowuyuan/2020-02/10/content_5476737.htm> [in Chinese]
- (55) PBS news, 'Read the full U.S.-China "Phase I" Trade Agreement'. 16 Jan 2020.
Link: <<https://www.pbs.org/newshour/economy/read-the-full-u-s-china-phase-1-trade-agreement>>

-
- (56) Raleigh, H., ‘Why China Shouldn’t Shut Down All its Wet Markets’. 29 April 2020.
Link:
<<https://thefederalist.com/2020/04/29/why-china-shouldnt-shut-down-all-its-wet-markets>>
>
- (57) Sina Finance, ‘Emergency! Beijing Xinfadi: Chopping Board for Imported Salmon is tested positive for COVID-19 virus’. 13 June 2020. Link:
<<https://baijiahao.baidu.com/s?id=1669365110540410120&wfr=spider&for=pc>> [in Chinese]
- (58) Sina Network, ‘Normal traffic and transportation will be restored throughout the country’, 14 March 2020. Link:
<http://k.sina.com.cn/article_1403611582_53a969be02000uo2g.html> [in Chinese]
- (59) Sina Network, ‘Press Conference on Epidemic in Beijing: Salmon was found to be contaminated, but no virus was detected before entering the contaminated site’. 16 June 2020. Link:
<https://k.sina.com.cn/article_1914880192_7222c0c002000ub9t.html?from=news&subch=onews> [in Chinese]
- (60) The Paper, ‘Speech by President Li Zhanshu of Standing Committee of NPC on Meeting related to Enforcement Assessment of Wildlife Protection Law’. 23 July 2020. Link:
<https://www.thepaper.cn/newsDetail_forward_8404041>. [in Chinese]
- (61) Thomson Reuters, ‘WHO urges countries to investigate early COVID-19 Cases’. 5 May 2020. Link:
<<https://www.cbc.ca/news/world/who-france-covid-19-early-cases-1.5555573>>
- (62) WTO news, ‘WTO’s Trade Facilitation Agreement Enters into Force’. 22 Feb 2017.
Link: <https://www.wto.org/english/news_e/news17_e/fac_31jan17_e.htm>
- (63) Xinhua News, ‘269 cases after 11 June, Beijing Municipality Report the New Infection Cases’. 25 June 2020.
Link: <<https://baijiahao.baidu.com/s?id=1670458307449985454&wfr=spider&for=pc>> [in Chinese]
- (64) Xinhua News, ‘Zhejiang Province holds first aquatic product export online fair’. 27 May 2020. Link: <
<https://baijiahao.baidu.com/s?id=1667811489403962671&wfr=spider&for=pc>> [in Chinese]

Other materials

- (65) Bollore Logistics, ‘COVID-19 Impact Update’.
Link: <<https://www.bollore-logistics.com/en/Pages/COVID-19.aspx>>. accessed on 2 July 2020.
- (66) Border Network. Link: <<http://hs.bianmachaxun.com/report/>>. accessed on 15 July 2020.

-
- (67) CITES Cross-cutting Issues, ‘Captive-produced animals and artificially propagated plants’. Link: <<https://cites.org/eng/prog/captive-breeding>>. accessed on 21 July 2020.
- (68) FAO and WHO, ‘COVID-19 and Food Safety: Guidance for Food Businesses’. 7 April 2020.
- (69) Foreign Affairs Office of Heilongjiang People’s Government, Notice on Closing-down Border. 11 April 2020. Link: <<http://www.hljfao.gov.cn/newsshow.php?cid=5&id=1462&lanmu=2&zt=0>>. [in Chinese]
- (70) Joint Media Statement of the 10th Regional Comprehensive Economic Partnership Inter-sessional Ministerial Meeting. 23 June 2020.
- (71) MACMAP, Vietnam notification on its initiative to draft a ban on the trade and consumption of wildlife. Link: <https://macmap.org/OfflineDocument/Covid19/COVID_VNM_1.pdf>. accessed 10 July 2020.
- (72) MARA, Emergency Order on Further Strengthening COVID-19 Prevention and Control for Fish Vessels Operating on High Seas and EEZ of other countries (NBY[2020]7). [in Chinese]
- (73) MARA, Notice on Publishing National Livestock and Poultry List. 29 May 2020. Link: <http://www.moa.gov.cn/gk/tzgg_1/tz/202005/t20200529_6345586.htm> [in Chinese]
- (74) MARA, Notice on the Enforcement of the Decision on Prohibiting the Illegal Transaction of Wildlife, Abolishing Edible Use of Wildlife and Protecting Human Health. 4 March 2020. [in Chinese]
- (75) MARA, the Notice on Adjusting the Fish Close Season (NYF[2018]1). [in Chinese]
- (76) Pasadilla., G.O., *E-commerce provisions in RTAs: Implications for negotiations and capacity building*. (UNESCAP Working Paper, No.192., 2020)
- (77) SAMR, MARA and NFGA, A Joint Notice on Strengthening the Supervision of Wild Animal Trade Market and Enhancing Infectious Disease Prevention and Control (GSJMD [2020]2). [in Chinese]
- (78) Sino-Euro and Sino-Asia Cargo Railway. Link: <<http://cn.cetrains.com/>> [in Chinese]
- (79) The Standing Committee of NPC, ‘The Decision on Prohibiting the Illegal Transaction of Wildlife, Abolishing Edible Use of Wildlife and Protecting Human Health’. 24 Feb 2020. [in Chinese]
- (80) The State Council Joint Prevention and Control Mechanism, Notice on Conducting Risk Check for Frozen and Chilled Meat (including aquatic products). 14 July 2020.
- (81) WTO, Analytical Index of the GATT. Link: <<https://docs.wto.org/gtd/Default.aspx?pagename=GATTanalyticalindex&langue=e>>. Accessed on 15 July 2020.